

SMITHSONIAN INSTITUTION  
INSTITUTE OF SOCIAL ANTHROPOLOGY  
PUBLICATION NO. 15

# INDIAN TRIBES OF NORTHERN MATO GROSSO, BRAZIL

*by*

KALERVO OBERG

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WITH APPENDIX

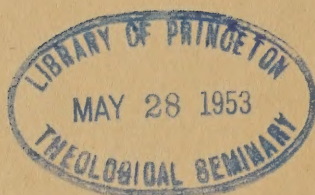
ANTHROPOMETRY OF THE UMOTINA, NAMBICUARA, AND IRANXE, WITH  
COMPARATIVE DATA FROM OTHER NORTHERN MATO GROSSO TRIBES

By MARSHALL T. NEWMAN



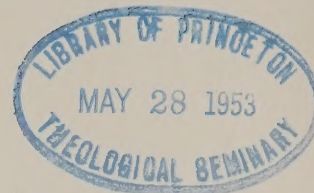
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## LETTER OF TRANSMITTAL

SMITHSONIAN INSTITUTION,  
INSTITUTE OF SOCIAL ANTHROPOLOGY,  
*Washington 25, D. C., May 31, 1951.*

SIR: I have the honor to transmit herewith a manuscript entitled "Indian Tribes of Northern Mato Grosso, Brazil," by Kalervo Oberg, with an appendix entitled "Anthropometry of the Umotina, Nambicuara, and Iranxe, with Comparative Data from Other Northern Mato Grosso Tribes," by Marshall T. Newman, and to recommend that it be published as Publication Number 15 of the Institute of Social Anthropology.

Very respectfully yours,

GEORGE M. FOSTER, *Director.*

DR. ALEXANDER WETMORE,  
*Secretary of the Smithsonian Institution.*

\* \* \* \*

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## PHONETIC NOTE

- '=glottal stop, as in *mama'é*.  
 c=nasalized vowel, as in *tamuí*.  
 ĩ=unrounded back *i*, as in *ihit*.  
 E=short *e*, as in *yaiE*.





## PREFACE

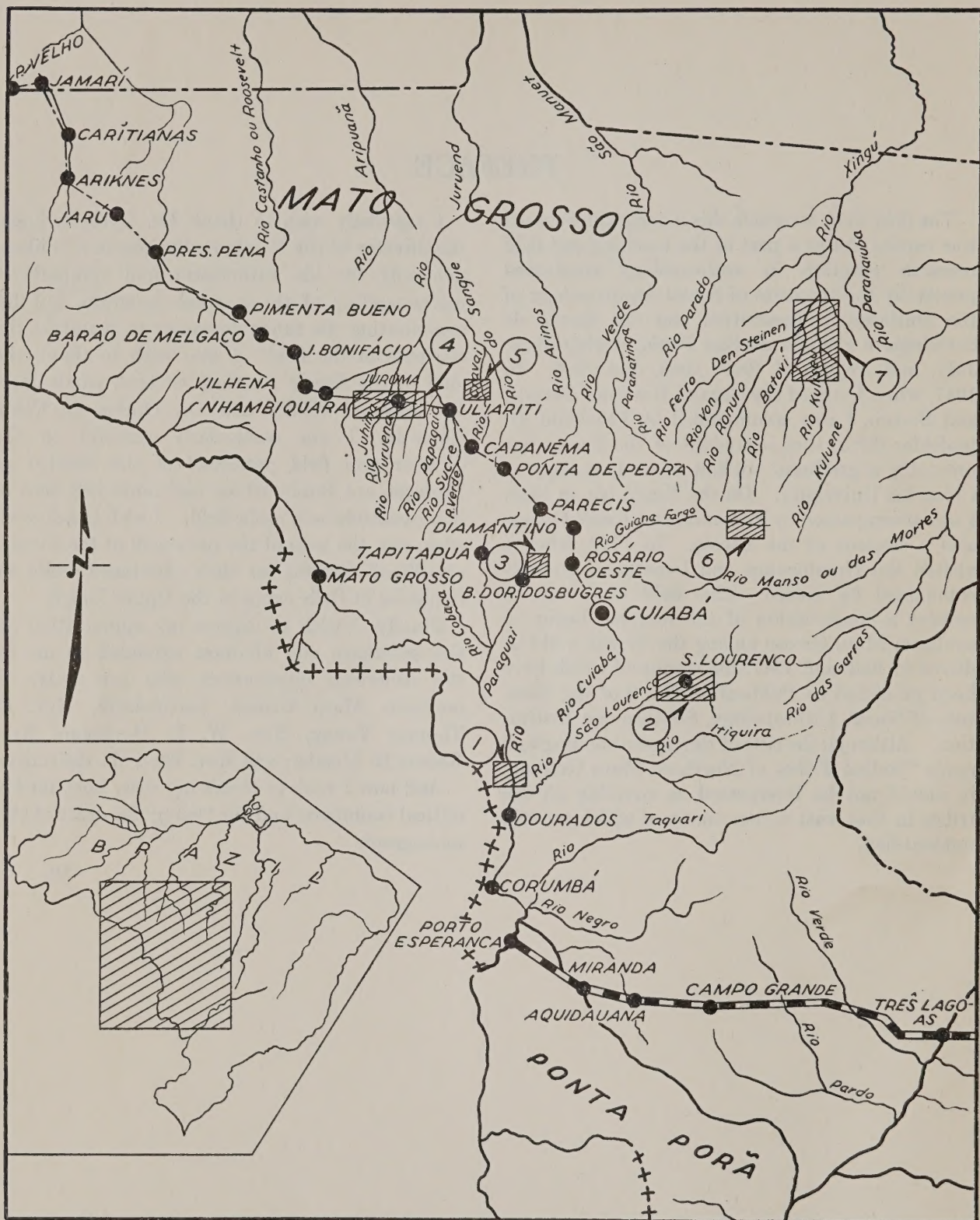
The field work on which this monograph is based was carried out as a part of the teaching and field research program in anthropology conducted jointly by the Institute of Social Anthropology of the Smithsonian Institution and the Escola de Sociologia e Política de São Paulo, during June, July, and August of 1947, 1948, and 1949. In 1947, when I visited the Bacairí, Umotina, Paressí, and Bororo, I was accompanied by Fernando Altenfelder Silva, then a student of the Escola but presently a graduate student of anthropology at Columbia University. On the Xingú trip in 1948, I was accompanied by Fernando and Kaoro Onaga, also a student of the Escola. In 1949, when I visited the Nambicuará and Umotina I was accompanied by Kaoro. This field work was in essence a continuation of the research begun in southern Mato Grosso among the Terena and Caduveo in 1946 and 1947, the results of which have been published as Publication No. 9 of the Institute of Social Anthropology, Smithsonian Institution. Although the title of the present monograph reads "Indian Tribes of Northern Mato Grosso," it should not be interpreted as covering all the tribes in that vast region, many of which are still unidentified.

I especially wish to thank Dr. Cyro Berlinck, the director of the Escola de Sociologia e Política, not only for his enthusiasm and sympathetic understanding of the research program, but for contributing the funds necessary to maintain the students in the field. I also wish to thank the staff of the Escola for their counsel, particularly Dr. Antonio Müller and Dr. Otavio da Costa Eduardo. I am particularly grateful to the director and field personnel of the Serviço de Proteção aos Índios whose assistance has been of immeasurable help in the field. I wish to acknowledge, too, the help of the personnel of the Fundação Brasil Central for their assistance while we remained at their camp in the Upper Xingú.

Finally, I wish to express my appreciation for the assistance and kindness extended to me by the American missionaries who are active in northern Mato Grosso, particularly, Rev. C. Thomas Young, Rev. W. L. Buckman, Rev. Robert E. Meader, and Rev. Emil W. Halverson.

And now I wish to thank my wife, Lois, for her critical comments and for typing the draft of this monograph.





MAP 1.—Northern Mato Grosso, Brazil, showing the location of tribes among whom field work was done. Numbered blocks refer to the following tribes or groups of tribes: 1, The Guató; 2, the Bororo; 3, the Umotina; 4, the Nambicuará; 5, the Iranxe; 6, the Bacairi; 7, the Upper Xingú tribes.



# Indian Tribes of Northern Mato Grosso Brazil

By KALERVO OBERG

## THE CAMAYURÁ

### THE UPPER XINGÚ BASIN AND ITS PEOPLE

#### THE REGION

The Xingú is one of the great tributaries of the Amazon River, which, from its sources in the extensive sandstone plateaus of the Brazilian Shield, flows northward between the Araguaia-Tocantins and Tapajoz Rivers to join the Amazon near its mouth, west of Marajo Island. The headwaters of the Xingú include five major tributaries which join the Xingú proper at approximately latitude 12° south, thus forming a triangular drainage basin enclosed roughly between longitudes 52° and 55.5° west and latitudes 12° and 14° south. From west to east these tributaries are: Rio Von den Steinen, Rio Ronuro, Rio Batoví, Rio Kuliseu, and Rio Kuluene.

This region, which we might call the Upper Xingú Basin, is bounded on the south by the semiarid Planalto do Matogrosense, on the east by the Serra do Roncador, and on the west by the Serra Formosa. On its northward course the Xingú gradually enters the denser forests of the Amazon Basin, its descent being broken by numerous rapids. Within the Basin itself the five principal tributaries, plentifully stocked with fish, provide at least 1,000 miles of easily navigable waterway for canoes. These physical features, which give the Basin a degree of isolation and a wealth of resources not found in the immediate surroundings, account in great measure for the concentration of Indian tribes in the area.

At their sources the tributaries are clear and swift, but as they enter the Basin they become meandering, muddy streams, filled with sandbars in the dry season and overflowing their banks for miles around during the rains. The topography and vegetation of the Basin are in sharp contrast to the plateau in which the rivers find their sources. On the "serrado," or plateau, the forest, the so-called "galeria" forests, are along the margins of the rivers, while the flat plateau is covered with grass and scrub forest. In the Basin, however, the margins of the rivers are covered with dense growths of bamboo, vines, and flood-resisting trees. During the rainy season this short forest is covered with water, and during the dry season the trees and plants are able to grow by water obtained from the river. Back of this short forest margin is the flood plain ranging in width from one-half mile to many miles. During the rainy season it is covered with water, but during the dry season it is too dry to sustain forest life. On the flood plain, therefore, we find only burití palms, bushes, and grass. On the whole, the flood plain is open country. On the higher ground between the rivers which is not covered by floods we find the permanent forest. Compared with the "serrado," or savanna, the situation is reversed here. The permanent forest belt lies between the rivers on high ground while the flood plain is open. On the "serrado" the "galeria" forest follows the stream beds of the rivers, while the high ground between the rivers is open country.

This area is distinguished by sharply marked

dry and wet seasons. Rains begin in the latter part of September and continue until April. During the rainy season thunderstorms are almost a daily occurrence. During the day the temperature ranges in the 90's and falls somewhat in the night. In January, however, there is a 2-week period when no rain falls and the temperature remains high. The dry season begins in May, and during June, July, and August scarcely any rain falls. During these months in 1948 no rain fell at all. The sky was constantly clear, the humidity high, and the prevailing winds were light easterly breezes appearing in the afternoons. At 7 a.m. the temperatures ranged around 60° F., rising at 2 p. m. to 90° F. During August and September the fires, caused by Indians clearing the land for planting, fill the air with smoke or "bruma seca" as it is called in Portuguese. The haze steadily increases until the first rains in September. When the rains cease in April the rivers slowly begin to fall, reaching their lowest levels in September, the drop on the Kuluene being about 12 feet. (For temperature graph, see fig. 1.)

Brazilian geographers define this area as marginal, for it lies between the upland savanna of the plateau and the lowland rain forest of the Amazon. The Upper Xingú Basin, however, does not stand out as a separate area but is part of the east-west belt of country which slopes northward from the Brazilian Shield. The plateau to the south has an average altitude of 500 meters and at the confluence of the Ronuro and Kuluene Rivers with the Xingú the members of the Roncador-Xingú Expedition gave the altitude as 250 meters. Geological maps indicate that the Upper Xingú Basin is predominantly Devonian sandstone. Outcroppings of stone are rare and what were seen appeared to be "canga," although pieces of reddish sandstone were seen among the Indians, these stones being used for sharpening axes and knives.

It follows, therefore, that the vegetation found in this transition zone would be a mixture of savanna and rain forest types. Such economically useful palms as the burití, tucum, acurí, bocaiuva, babasú, and buritizana are found in abundance. The burití, as usual, occurs in the well-watered bottom land where its fan-shaped foliage makes it conspicuous, the tall babasú on the hillsides where

its feather-duster shaped top makes it quite outstanding among other palms. The babasú, however, is found only on the hilly fringes of the Basin. Among the forest trees the jatobá, the rubber tree, the cumbarú, the pau d'arco, the mameleiros, and the various trees of the jacarandá family are common. In late August the piuvas (jacarandá) begin to flower, some putting out bright yellow blossoms, others light purple. As these trees bloom before the leaves come out, the whole tree is one mass of flowers giving the forest a flower-garden appearance. A curious tree is the lixeira. Its short gnarled trunk and branches are covered with large rough leaves which the Indians use for planing or smoothing wood surfaces. American missionaries call it the sandpaper tree. The piqui with its oleaginous fruit and the latex-producing mangabeira with its delicious plum-sized fruit, no doubt, grow wild in this area although the ones seen were planted around the villages by the Indians. Important, too, are the cane plants and the vines. Among these the numerous species of taquara (bamboo), the camaiuva, and the uba are particularly useful to the Indians in the manufacture of arrows and flutes. Among the vines the sipó provides lacing in arrow manufacture while the timbó vine with its sweet-smelling flowers is used for drugging fish.

In spite of the varied mammalian life of the region, the Indians restrict themselves to the hunting of monkeys for food and a few other animals for their skins and bones. The following description of the animals found in the region is based on the work of José C. M. Carvalho.

Among the large animals are the tapir (*Tapirus terrestris* L.), the jaguar (*Felis onca* L.), jaguatirica (*Leopardus pardalis brasiliensis*), the plains deer, "campeiro" (*Ozotoceros bezoarticus* L.), the forest deer, "mateiro" (*Mazama rufos* Illiger). The black jaguar and puma are also reported.

The wild pigs are represented by the peccary, "caitatu" (*Pecari tajacu tajacu* L.) and the larger "geixada" (*Tayassu pecari pecari* Link).

The capybara (*Hydrochoerus hydrochaeris*) and the paca (*Cuniculus paca*) represent the larger rodents.

In addition, the region abounds in such animals as coati (*Nasua nasua solitaria* Schinz), the otter (*Lutra paranensis*), two kinds of anteater, the "tamandua-bandeira" (*Myrmecophaga tridactyla*



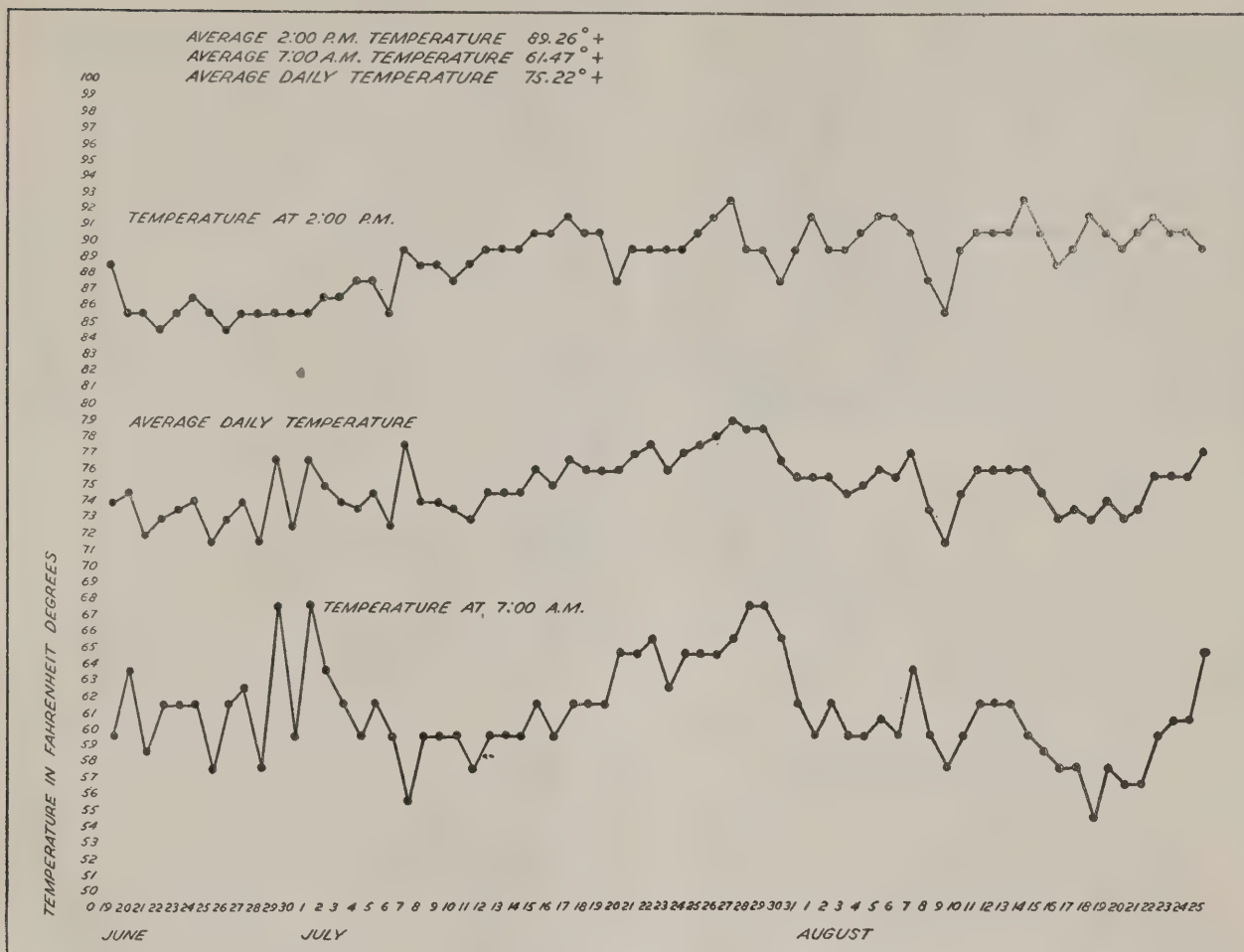


FIGURE 1.—Temperature readings taken at Jacarei Camp, Upper Xingú.

L.) and the “tamandua colete” (*Tamandua tetradactyla* L.). Among the numerous monkeys the *Cebus xanthosternos* (Wied) and the *Alouatta beelzebul* L. are the most common.

Among the birds which the Indians hunt both for food and their feathers are the “jacobim” (*Psophia viridis* Spix), the “mutun” or curassow (*Mitu mitu* L.), and the duck (*Cairina moschata* L.). The parrots, macaws, toucans, hawks, eagles, and buzzards are hunted and kept for their feathers.

The principal protein food of the Indians of the Upper Xingú is fish. Among the varieties most often found are the “bicuda,” “avoadeira,” “piauí,” “curimatã,” “pacu,” “traíra,” “piranha,” “cachorro,” “pirarará,” “pintado,” “fidalgo,” “barbado,” and “matrinchá.” In addition, the rivers abound in crocodilians and terrapins. The

terrapins provide a plentiful supply of meat and in August their eggs are eagerly hunted and eaten by the natives.

Among the most unpleasant occupants of the area are the flies and mosquitoes, which, during the rainy season, are particularly disturbing. Although the most dangerous is the malaria carrier (*Anopheles* (*Nyssorhynchus*)), the ones which cause the greatest discomfort are the smaller gnats such as the “pium” (*Simulium amazonicum*), the “Mosquito-polvora” (*Culicoides*), the “borrachudo” and the small bee called “mosquito lambe-olho” (Carvalho, 1949, pp. 8-17).

#### THE PEOPLE

The Upper Xingú Basin is today inhabited by approximately 733 Indians belonging to at least

four different linguistic groups. The Gé-speaking Suyá, who have been formerly reported as living in the area, are today located on the Rio Suyá Missú, a small eastern tributary of the Xingú some distance below the junction of the headwater tributaries of the Xingú proper. The Suyá are at present on a war footing with the Basin tribes and when a northeast wind was blowing the Camayurá would point to the smoke rising from their forest fires. In 1948 the Villas Boas, leaders of the Roncador-Xingú expedition, gave the following distribution of the tribal units and their numbers based on direct contact with the tribal groups:

Carib-speaking tribes:	
Calapálo.....	150
Cuicúru.....	140
Náhukwa.....	18
Matipú.....	16
Tsúva (at present living among the Cuicúru).....	4
Naravúti (living in their own house in the Calapálo village).....	5 or 6
Arawak-speaking tribes:	
Waurá.....	96
Iwalapetí (at present have no village but live scattered among the other tribes, planning to rebuild their vil- lage).....	28
Mehinácu.....	110
Custenau (consisting of a woman and her son living among the Waurá)....	2
Tupí-speaking tribes:	
Camayurá.....	110
Auetí.....	30
Trumai-speaking tribes:	
Trumai.....	25

Scientific knowledge about the Upper Xingú and its Indian inhabitants dates from the two voyages (1884 and 1887) during which Karl Von den Steinen descended the Xingú River. Later visits to the area are summarized in the Handbook of South American Indians as follows:

Herman Meyer made an expedition in 1896 to the Kuliseu and Jatobá Rivers, and another in 1899, mainly to explore the Ronuro River. In 1900-1901, Max Schmidt traveled to the Kuliseu River. Later Hintermann (in 1924-25), Dyott (1928), Petrullo (in 1931), and Buell Quain (in 1938) studied the Upper Xingú River region [Levi-Strauss, 1948, vol. 3, p. 321].

The interest of the Brazilians themselves in the Upper Xingú and its inhabitants has been intensified in recent years with the establishment in 1942 of the Central Brazilian Foundation (Fundação

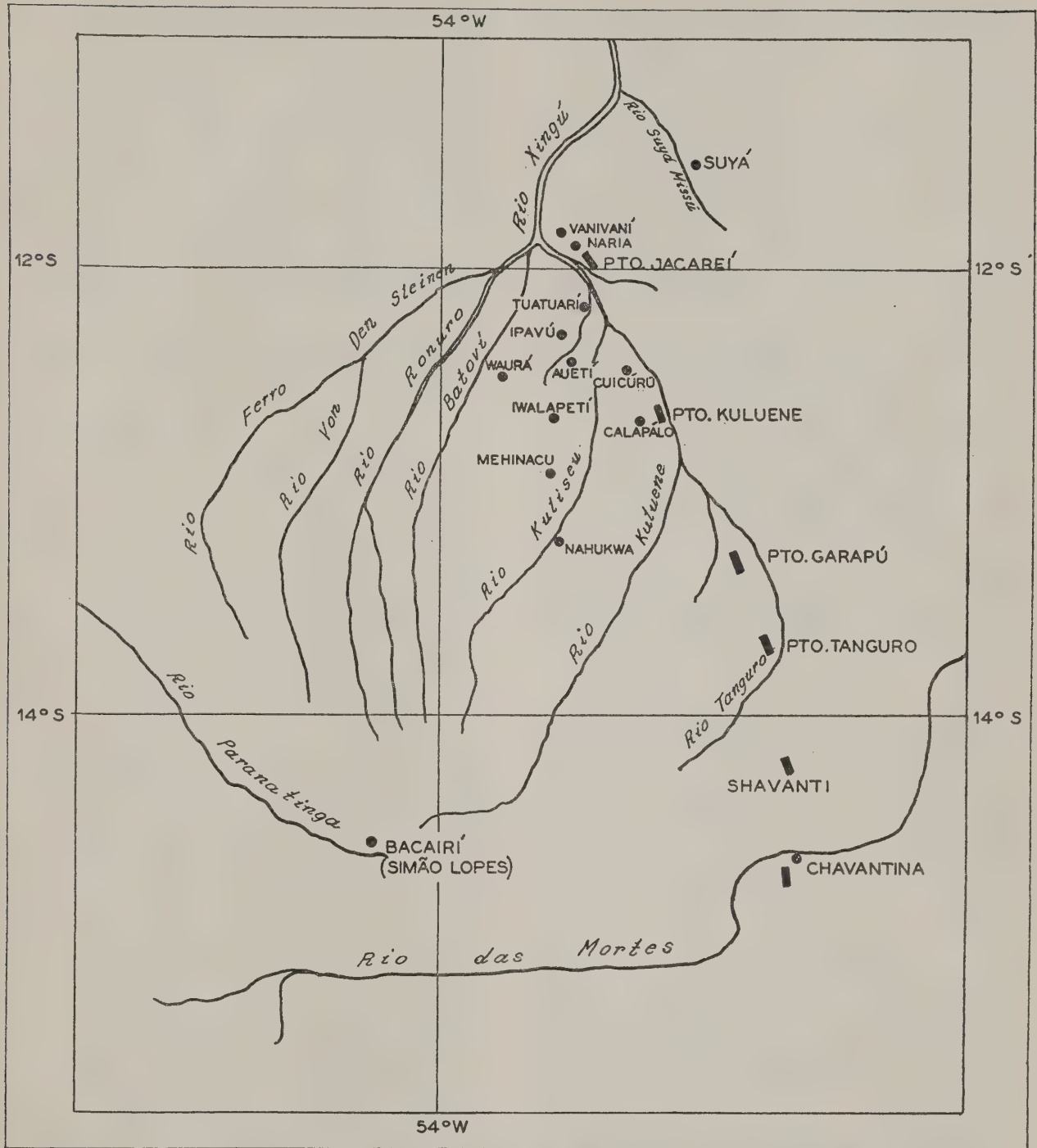
Brasil Central). This Foundation, strongly backed and financially supported by the Federal Government, was created to open up the vast uninhabited stretches of central Brazil by building roads, establishing settlements, and by laying a series of airfields which would connect Rio de Janeiro and Manaus in a straight line. The spearhead of the Foundation which is to blaze the trail is known as the Roncador-Xingú Expedition. It set out from São Paulo under the command of Colonel Flaviano Mattos Vanique in 1943. By 1944 the Expedition had reached Arágarças on the Araguaia River where a permanent base camp was erected. The following year a camp and airfield were established at Chavantina on the Rio das Mortes.

The advance party of the Roncador-Xingú Expedition reached the Upper Xingú Basin in 1946, and in April 1947 an airfield and permanent camp were established on Jacarei Creek, a tributary of the Kuluene River. In 1947 and again in 1948 the Museu Nacional of Rio de Janeiro sent a number of specialists into the area to study the flora and fauna, to take physical measurements of the Indians, and to gather information about their cultures. In 1948 the author with two students, Fernando Altenfelder Silva and Kaoro Onaga, of the Escola Livre de Sociologia e Política de São Paulo, spent 2½ months in the area, using Jacarei Camp as a base. Dr. Sylvio Grieco of São Paulo made trips into the area in 1947, 1948, and again in 1949, his interest being the study of native diseases and native psychology.

In addition to the scientific expeditions that have entered the area since its discovery by Von den Steinen, the Upper Xingú has held a fascination for missionaries, fortune hunters, and, more recently, for photographers and journalists, in the last case naked Indians being the great drawing card. American Protestant missionaries have made repeated trips into the area since 1926 and for some years the Reverend Thomas Young and his family were stationed among the Náhukwa. This mission was withdrawn in 1938 but in the last 2 years the Reverend Mr. Young has again been active in the area. At present there is a move to have the Serviço de Proteção aos Índios establish a post at Jacarei Camp on the Kuluene.

In the present century the Upper Xingú gained world-wide interest with the disappearance of Colonel Fawcett. In 1926 Colonel Fawcett, an





MAP 2.—The Upper Xingú Basin showing the approximate location of tribal villages in 1948. Trumai villages, Vanivani and Naria; Camayura villages, Tuatuari and Ipaçu. The other tribal villages are indicated by the tribal name alone. Rectangles in black indicate airfields and posts recently established by the Roncador-Xingú Expedition.

English engineer, accompanied by his son and another Englishman, set out from Cuiabá for the area, in search of the lost city of fabulous wealth reported by Moribeca in the eighteenth century. They never returned. Numerous search parties entered the region, some, like the American newspaperman, Thomas Winton, also never to return. Based on information given to Thomas Young by the Indians, the story of Fawcett is as follows:

Fawcett and his companions reached the Upper Xingú and settled among the Cuicúru. Fawcett and his son married Indian women, each of the women giving birth to a child. Colonel Fawcett's child, a daughter, died, but his son's child, a boy, survived and grew up to be Tulipé, the so-called white Indian who for some years lived at the Indian Post of Simão Lopes but in 1949 was living in Cuiabá. The other Englishman died from an infection in his knee. After a year Fawcett and his son persuaded a number of Calapalo to lead them on in their search. The Calapalo relate that when the food ran out and they were far inside enemy territory to the northeast of the Xingú they tried to induce Fawcett to return. But he persisted in going on. The Indians thereupon killed the two white men by shooting them with arrows, buried them, and returned to their village. Although the Serviço de Proteção aos Índios sent in a party to verify the story and later had the story published, tales of this kind die hard. There are still people who believe Fawcett and his companions are alive somewhere in the jungles of central Brazil.

Today there are rumors of rich gold and diamond deposits in the area, and the Brazilian authorities are cautious about anyone entering the region. At least part of this caution is motivated by a genuine desire to protect the Indians against the demoralizing effect of a large influx of miners. Yet any kind of permanent contact in the area will affect the Indians physically. In 1948 whole villages were down with the common cold, which in many cases turned to pneumonia, resulting in death. As in other parts of Brazil, the common cold, measles, and whooping cough have devastating effects upon the Indians, who appear to have little resistance against pulmonary infections. The introduction of such diseases as syphilis and tuberculosis, of course, would quickly decimate the population.

To date the Indians of the Upper Xingú have survived physically and culturally owing to their isolation. As has been mentioned, the Xingú River in its main course is broken by many rapids which have so far effectively barred navigation from the mouth of the river to its headwaters.

Until 1946 entry into the upper watershed was made overland from the south—a long and difficult journey by pack ox and mule or more recently by truck and then by canoe down one or other of the tributaries. With the establishment of airfields along the Kuluene since 1946, the region can be reached from Rio de Janeiro by plane in a single day. So far the air service has been provided by the Brazilian Army Air Force which has been serving the Expedition with flights every 2 weeks during the dry season. During the wet season the Fundação Brasil Central has serviced the area from Chavantina on the Rio das Mortes sporadically by their own two-seater Piper Cubs and Fairchild planes. As this plane service is official, permission to enter the region is controlled by the Brazilian Government. This prevents indiscriminate entry and undoubtedly will assist in protecting the Indians. Thus, so long as commercial airlines are kept out of the area the Indians will continue to enjoy a certain degree of isolation, the contacts with the whites being under the control and supervision of those who appear to have the interests of the Indians at heart.

The physical barriers which define the Upper Xingú as a drainage basin and have given its native inhabitants a high degree of isolation, also mark its boundaries as a social and cultural area. On all sides live other Indian tribes who are openly hostile to the Upper Xingú Tribes. To the east are the Gê-speaking Cayapó, Shavante, and Suyá; to the south and west the Tupí-speaking Juruna, Cayabí, Shukaramai, and other, as yet, unidentified groups. Raid and counterraid are still essential elements in the everyday life of the people. In May and again in July 1948, hostile Indians came at night within hearing distance of Jacarei Camp. The apprehension of the Indians, especially the fear shown in the faces of the women and children, was unmistakable evidence of the reality of war in their lives.

The internal structure of the Basin with its network of rivers, on the other hand, makes intercourse between the tribes easy. Not only do all the main tributaries meet at the apex of the triangle but during the rainy season the flooded lower portion can be crossed between the rivers, the canoes picking their way between the palms and undergrowth. In other words, there are no natural boundaries within the Basin itself.



Although the Indians in the Basin are split up into many tribes speaking languages belonging to three or four different linguistic families, the outstanding characteristic about their interrelations is that they live in peace with one another. In referring to the Indians of the Upper Xingú, the Brazilians speak of them as the Xinguanos, treating them as a social unit. American missionaries call them the League of Indian Nations, again stressing the peace and amity that exists among them. Although the Camayurá mention a time of troubles and the Trumai claim that they are newcomers from the south and had difficulties in the past, there is no doubt that the tribes today intermarry, trade, and gather at each other's villages for ceremonies. Settled villages and a wealth of resources, common enemies, easy communications, and tribal specialization in crafts no doubt help to explain these peaceful relations. Each tribe knows enough of the other languages to carry on trade and ceremonials. One Arawak-speaking Iwalapetí spoke Cuicúru (Carib) and Camayurá (Tupí) quite fluently, besides being able to make himself understood for ordinary purposes, after a year's practice, in Portuguese. Owing to the fact that practically all white visitors from the south used Bacairí canoe men and interpreters when entering the Basin, many Bacairí words have come into common use.

The social interaction and the resulting peaceful relations existing between the tribes is carried on within a cultural framework showing great formal similarities. The full extent of these similarities and differences is, of course, not yet fully known and awaits the more intensive study of all the tribes concerned. To say that the Upper Xingú Basin is a culture area may be overstressing the point. It may be but a subculture in the wider so-called Marginal Area surrounding the headwaters of the southern tributaries of the Amazon River. Yet all observers have been struck particularly by the similarities in material culture.

Brazilian observers call the Upper Xingú the "área do ulurí" (the ulurí area). This small triangular piece of bast worn by women over the pubis is certainly a common trait throughout the region. It is interesting to note that triangular ulurí-shaped pieces of pottery have been found in archeological excavations near the mouth of the Xingú River, thought by some to have been used

for the same purpose. This trait is certainly distinctive and marks the Xingú tribes off from their immediate neighbors.

Other common traits on the material level are as follows: The large elliptical grass-covered houses built in a circle or oval around a central flute house, jatobá bark canoes, the keeping of "harpia" eagles in conical cages, large flat-bottomed pots and the openwork sieve for processing manioc, the general use of the openwork hammock, small zoomorphic flat pottery dishes, carved zoomorphic wooden seats, the spear thrower used in games, the bull-roarer used in religious ceremonies, the whistling arrow, necklaces of round and rectangular pieces of snail shell, the sacred flute, the predominance of fish over meat in the diet of the people, the intensive use of piqui, and the use of tobacco restricted to men who have had shamanistic experiences.

In connection with the nonmaterial aspects of the culture one might point out such traits as bifurcate-merging kinship terminology, cross-cousin marriage, the extended family as the household unit, respect toward in-laws, the chief as economic and ceremonial leader only, annual ceremonies connected with the dead and possibly related to the origin myth, and belief in guardian spirits exemplified by a variety of symbols.

It can hardly be said that these traits are restricted to the Upper Xingú. What appears to be true, however, is that each of the different linguistic units contributed its share of traits which have now become to a great extent common property to all the tribes, having been molded and combined to form a complex of traits which marks the Upper Xingú off from the neighboring areas.

Although all the Upper Xingú tribes are a riverain people, one seldom finds the villages located on the banks of the main streams. On the Kuluene, at least, only the Calapálo village is situated directly on the bank and visible from the river itself. The pattern of settlement is influenced by a number of circumstances. As the main tributaries approach their junction with the Xingú they flow through a flat plain, and, as has been mentioned, the flood plains along the rivers widen. Therefore, in order to build their villages above floodwater and to have cultivable land in the rainy season, the Indians are forced to

move back from the main streams for a considerable distance.

Another condition of primary importance is that of timbó fishing. In order that the timbó drug have sufficient time to affect the fish, the slower the current in the stream the better. The main streams with their large volume of water and constant flow are unsuited for this type of fishing. The ideal areas are slow-flowing tributaries and shallow lakes and ponds left by the receding floodwaters. The Camayurá and Trumai who live on the lower reaches of the Kuluene build their villages in the headwaters of the small tributaries or near lakes. The tributaries, as they approach the Kuluene, build up dykes and sandbars at their mouths which tends to slow up the flow and in some cases to turn the lower part of the tributary into a lake. These arms are thus ideal places for timbó fishing and their headwaters flowing from high ground are also suitable places for permanent settlement.

Another consideration is defense against enemies, this being particularly true of the Indians living near the Xingú up which the Suyá and the Juruna come to make their raids. As one approaches the Camayurá and Trumai Villages the tributaries break up into lesser streams almost covered by overhanging vegetation. It is up one of these narrow approaches that canoes must find their way to reach the narrow path which leads to the village itself. The canoes used by the villagers are also generally hidden in the undergrowth so that very exact knowledge is required to find the path. It is true, of course, that the enemy sooner or later locates the village by the smoke from garden clearings and makes his approach overland. When enemies are reported in the area the villagers do not light fires at night, so as to prevent the enemy from locating the village in the dark. When an attack is imminent the inhabitants abandon the village at night, scattering in the surrounding forest where they sling their hammocks from trees.

The villages are only semipermanent. As the soil near the village becomes exhausted the Indians move to another location, taking into consideration not only soil but opportunities for fishing and defense. As piqui and mangabeira trees are planted around the villages, the old village site continues to be used until another orchard is

established at the new site. The houses at the old village are not torn down, but continue to be used during the piqui harvest. For a long time the old village remains not only as a fruit-producing area but also as a ceremonial center, for the plaza of the old village is also the place where the dead rest and for whom the great annual ceremony of the dead is given each year. Both the Camayurá and the Trumai speak of their manioc and fishing village and their piqui village. This two-village type of settlement, however, is not a permanent pattern, for as soon as new trees reach bearing age the old village site is abandoned. The lower region around the tributaries of the Xingú reveals many places where only old and very large piqui trees grow, giving evidence that the Indians once lived there.

#### THE CAMAYURÁ AT JACAREI CAMP AND AT TUATUARÍ

Such, in brief, is the geographic, social, and cultural setting of the Camayurá, a Tupí-speaking tribe, which forms the principal subject of this study. Perhaps a more realistic introduction to the Camayurá can be given if the writer describes his first contact with them at Jacarei Camp and at the village of Tuatuari.

A DC3 of the Brazilian Air Force landed us on Jacarei Airfield one forenoon early in June. Even before the plane had come to a halt, naked Indians could be seen scurrying from the camp to the airfield to meet the plane. As we stepped down, the first to greet us were the three Villas Boas brothers—Orlando, Claudio, and Leonardo, bearded young men who for 5 years had commanded the spearhead of the Expedition. As Fernando, Kaoro, and I assisted in the unloading of our supplies the Indians drew nearer, occasionally making low remarks to one another. Soon a man, naked excepting a string of beads around his waist, approached and touched me on the chest with his hand, "Como chama? (What is your name?)," he asked. Then in Tupí he launched into a long series of questions which when translated by one of the Villas Boas can be summarized as follows: "Are you married? What is your wife's name? How many children do you have? What are their names?" Then looking at Fernando and Kaoro he asked, "Are these your sons? Are they your brothers?" To the Indian the fact that we were



not related seemed puzzling. His perplexity was increased further when he observed that Kaoro, who is a Japanese-Brazilian, was different in appearance from the rest of us. The question of Kaoro's kinship status was cleared up to some extent weeks later when an Indian, leisurely turning the pages of Time magazine, came to a picture of a Japanese. He jumped up shouting, "Kaoro irmão, Kaoro irmão (Kaoro's brother)" and went about the camp showing the picture to the whites and Indians alike. No doubt the Indians felt better now that it was known that Kaoro had a brother; that he was a member of a kinship group.

Thus, on the first day, we were made aware in a very intimate way of a basic characteristic of the people we were going to study—social relationships were kinship relationships. To know a man you must know his kinship ties. Throughout our entire stay in the Upper Xingú this question of a person's relationships kept constantly coming up. Every time an Indian saw a picture of a person in a newspaper or magazine he insisted upon knowing his or her name and the relationship to us. One woman eventually suggested that the pictures in newspapers might be *mama'é*, or spirits, similar in some way to the symbols of spirits which they themselves carve or paint on masks, posts, and other objects.

The buildings of the Expedition were located on the edge of the south end of the airfield. In the center of the camp was a huge old piqui tree. On one side of the tree was the main house, occupied by the Villas Boas and officials or visitors who happened to be in camp. On the other side of the piqui tree was a house occupied by the half-dozen "camaradas" or workmen who kept the airfield clean and were busy making preparations for the next move down the Xingú River. On both sides of these principal buildings were the storehouses, the dispensary, and the radio station. The cookhouse was about a hundred yards away near the bank of the Jacarei Creek. Back of these central buildings, forming a semicircular arc, were some half-dozen sheds put up by the Expedition to accommodate the Indians who visited the camp.

As Orlando led us to the main house he explained that the airfield and the camp were located on an old Indian village site. A group of Trumai were said to have been living here in the eighties of

the last century when Von den Steinen made his two voyages down the Xingú River. As the area was thickly covered with piqui and mangabeira trees, many of which had to be cut down to make the airfield, it became clear that Indians had lived in the general area for a very long time. Later we examined a clearing some 300 yards from the camp. A pit dug into the ground revealed heavy and light-reddish potsherds to a depth of 2 or 3 feet. Some of the sherds appeared similar to the large heavy-rimmed pots now made by the Waurá. A curious phenomenon was a ditch leading from the village site to the Jacarei Creek. This ditch varied from 6 to 10 feet in width and from 4 to 6 feet in depth and was about 500 yards in length. Its badly eroded condition appeared to indicate considerable age. None of the Indians could remember anything about it or had any explanation of its use. As the ditch was well above flood level its possible use as a canal did not seem fit. It may possibly have been used by the former occupants of the village as a protection against enemies in their trips to the creek to fetch water and to carry their canoes back and forth. This site and others in the region should reveal, through archeological investigation, interesting facts about the early history of the Upper Xingú.

After we had put up our camp beds in the main house, the Indians tramped in to look us over in detail. At first it was a little embarrassing to be completely surrounded by about 30 naked men, women, and children, each of whom insisted upon opening our shirt fronts, putting their hands in our pockets, pulling out and examining each item, pulling up our trousers to feel the hair on our legs, or repeatedly untying and tying our shoelaces. After trying on my glasses and sun helmet one Indian put his fingers to my mouth, wanting to know whether I could pull my teeth out. False teeth evidently are one of the great wonders of the *Caraíba*, or white man.

This personal intimacy we found to be another characteristic of the Indians. As far as white men were concerned we were accepted as brothers, with everything this relationship implied. We were expected to share our food and clothing and to give the Indians whatever they wanted in the way of twine, nails, knives, axes, or other articles that took their fancy. On the other hand, the Indians were quite willing to share with us. If they were

eating, they insisted on our eating with them. Most of the time our beds were loaded with manioc cakes, broiled fish, and turtle eggs. When we walked around the camp, both men and women insisted on walking with us with their arms around our waists. No doubt this intimacy was accentuated by curiosity and the fact that we asked little and gave much.

The total lack of privacy in the sense that we understand it was another characteristic of social intercourse to which we had to adjust. Twenty or more naked people living in unpartitioned houses and sleeping in open-weave hammocks can scarcely make for privacy. Men and women urinated without any attempt at concealment. Although they removed themselves some distance from the camp to defecate, digging a hole in the ground which was later covered, they showed no shame at being seen. Members of the Expedition had also seen married couples in the sexual act in their hammocks in broad daylight. Within the first week we were able to witness a childbirth, along with a number of boys and girls who happened to be near. Bathing in the river was a social act in which both Indians and whites participated. When we went to wash our clothes the Indians always wanted to take a hand.

Yet it would be a grave error to assume that the Indians do not have rules of conduct or attitudes of respect. The attitude of children, even when mature, toward their parents, particularly the father, was one of deepest respect. The behavior of in-laws was governed by strict rules of etiquette. Adolescent boys and girls when in puberty seclusion strictly avoided being seen in daylight. In other words, the rules of conduct pertained to behavior between individuals of defined kinship relationship and status and if broken, even accidentally, would bring shame to the person breaking the rule. Being ashamed of parts of the body or basic biological acts does not exist, as among ourselves. As we were in the brother class, brotherly intimacy was both expected and accorded us. Later, when I insisted on a certain degree of privacy when writing and would not allow people to smear my bedclothes with urucú I became known as a father, and even on occasions as a grandfather when I acted in a rather peremptory manner.

An important factor in this intimate relation-

ship between the Indians and the whites in Jacarei Camp no doubt was the kindly and indulgent attitude which the Villas Boas had toward the Indians. The success of the Expedition depended in a large measure upon peaceful and friendly relations with the Indians, who were used as guides, workmen, and interpreters when making contact with tribes to be met in the future advance of the Expedition. Furthermore, the Villas Boas were by temperament indulgent and friendly. Except when everyone had gone to bed, the living quarters were open to the Indians. They participated in every domestic act, in assisting in sweeping the dirt floor, fetching water, hunting, fishing, helping at the cookhouse, washing clothes and dishes. The eldest of the brothers, Orlando, who was the head of the camp, was particularly kind to the Indians, both in supplying them with food and tools and treating them with medicines. I shall always remember watching him writing his monthly report. Seated on a wooden bench, he was bent over a makeshift table and was calmly smoking a pipe and writing while two boys with their arms around him were seated on either side. In his lap he held a year-old child, with the mother bending over his shoulder with a few more children milling around his feet. To top it all, his favorite parrot sat on his shoulder and a bemteví (a yellow-breasted bird about the size of a robin) kept hopping on and off his head. Such consideration for the rights of others is indeed rare.

Intimate, often to the point of irritation, as the relation between whites and Indians were, there were clearly defined limits. To prevent the introduction of venereal diseases into the area the personnel of the Expedition were under strict orders to avoid sexual relations with Indian women. Members of the Expedition were selected for their sobriety and their capacity to endure long periods of inactivity under trying physical conditions. Visitors entering the region were similarly instructed by the authorities in Rio de Janeiro. The Villas Boas brothers by temperament and by their enthusiasm for the objectives of the Expedition were ideally suited for leading the advance party into the wilderness. The workmen were mulattoes from northern Brazil, accustomed to subsisting on manioc and fish, and with their deep sense of humor and a guitar appeared to be quite content in waiting for the word to advance. Protecting



the Indian women against the sexual advance of the white men was made necessary by the ease with which the unmarried women could be approached. Any sexual advance was considered a proposal of marriage both by the girl and her parents. On more than one occasion workmen had to be shipped out for this reason. To guard the camp against nocturnal prowlings, two of the Villas Boas always slept in their hammocks under the piqui tree in the center of the camp.

I have stressed the life in Jacarei Camp, for it was here that we met members of every tribal group in the Upper Xingú and where much of our work was done. The camp was an attraction for the Indians. Here they received food, tools, medical help, and were able to see the airplanes at close quarters. Some of the men had the opportunity to take flights to the base camps at Chavantina and Aragarças or over new territory to the northwest where the Expedition was planning a new airfield. The Indians, especially the Camayurá and the Trumai who knew the surrounding territory well, gave valuable help in pointing out the location of still unknown Indian tribes and the best routes of advance. The relations between the Indians and the whites are now unique, and it will be a pity if the Upper Xingú should be opened up to an influx of miners and settlers, for, inevitably, disease and exploitation will follow, leading to the degradation and eventual decimation of the Indian population.

On the day we arrived the Carib-speaking Náhukwa tribe was in camp, and it was with the Náhukwa that we began our work. The language difficulty, which we encountered throughout our stay, prevented us from gathering much information. We were, however, able to get the kinship terminology, and one night the men played two sacred flutes together. Some of the women I noticed had wavy hair, a trait which we were later to encounter among members of the other tribes.

The first Camayurá that we met was Nilo, the eldest son of Tamapú, the Camayurá chief. The Villas Boas had requested that the boy remain at Jacarei in order to learn Portuguese and the ways of the Brazilians so that he could assist as an interpreter. Tamapú assented but insisted that the boy should be kept away from women. The first act of acculturation was to give the boy a shirt, a pair of pants, and the name "Nilo." The

clothes Nilo considered as having decorative value only. In the cool of the morning while at his tasks he went about naked. In the heat of the afternoon when the young people painted themselves with urucú, Nilo put on his clothes, which were again taken off after dark. Nilo learned his Portuguese from the workmen in whose house he slept, and had learned enough to be of great use to us as an informant and interpreter. His Portuguese, however, was of a "caboclo" variety with a strong north Brazilian accent. For instance, when I would ask him to repeat in greater detail something upon which he had touched the day before, he would say impatiently in Portuguese, "Look, guy, I told you all about it yesterday."

Nilo was about 16 years old and had already been in puberty seclusion more than once, yet his father did not consider him mature, claiming that he got into too much mischief to be a man. At Jacarei Nilo also had his troubles. After repeated requests the Villas Boas presented him with a 22-rifle. Several days later he shot one of the Camayurá boys through the left arm and ribs. Although the boy survived, Nilo was in bad repute with the tribesmen as well as the Villas Boas. Some months later he and several younger boys broke into a warehouse and stole several blocks of brown sugar. This escapade angered the Villas Boas who complained to his father. The last time I saw Nilo he was whittling arrow foreshafts and learning to play the sacred flute behind the puberty screen in his father's house.

Another interesting character with whom we had personal contact throughout our stay was Canato. He was a handsome, well-built Iwalapetí Indian who had married Tipurí, the daughter of the Camayurá chief. He had been brought up among the Cuicúru and spoke their language well. Thus knowing Carib, Arawak, and Tupí dialects and a little Portuguese, he was of great use as an informant and interpreter. Of all the Indians we met, Canato was perhaps the wisest in the ways of the white man. He was always well supplied with odd pieces of clothing, raw sugar, and tools with which he carried on a lively trade with the other Indians. Canato is also the most photographed Indian in South America. As I have mentioned, the Upper Xingú, with easy access, has become a newspaper photographer's paradise. Since my visit to the Xingú I have seen Canato's picture

numerous times on the covers of the illustrated magazines of Rio de Janeiro and São Paulo.

For those who might wish to work in the Upper Xingú or elsewhere in central Brazil where the Indians still live under native conditions, it is well to mention here that "rapadura" is the best medium of payment. "Rapadura" is a form of brown sugar that is prepared in bricks of varying sizes. It is put up in boxes and is easy to ship, and with an ax or machete can be cut up into small pieces. Men, women, and children accept it eagerly. When one visits an Indian village or encampment the first thing the Indians do is to look over the supplies, and one's prestige is high or low depending upon the quantity of "rapadura." This was the commodity which we used for paying informants, reserving clothing, knives, and other more expensive articles as gifts for chiefs and their wives. The Xinguanos also have expensive tastes in beads. Only high-quality red and blue beads are accepted. Acculturated Indians accept tin cans of any kind, for they use them in making containers and other articles. In the Xingú, only cans with firm lids are accepted.

We had not been in Jacarei Camp—which by the way means alligator camp—for more than 3 or 4 days when a messenger arrived from Tuatuarí, the Camayurá village, informing the Villas Boas that a bad attack of "grippe" had broken out and requesting their help. Next morning we made our preparations and were ready to leave after lunch. For transportation on the rivers the Expedition had built several large boats capable of carrying over 40 people. In one of these, Leonardo, the youngest of the Villas Boas brothers, Fernando, myself, Nilo, and Mariká, the messenger, set out. We had our hammocks and enough K-rations for 2 days. The boat was propelled by a 10-horsepower Swedish outboard motor with the Smithsonian 5-horsepower Johnson Seahorse carried along as a reserve. In 10 minutes we were out of Jacarei Creek and began winding our way up the Kuluene River. Along this stretch the Kuluene is about a quarter of a mile wide and at this time of the year is shallow and broken by sandbars.

As we sputtered along with Mariká in the bow pointing out the channel, which kept swinging from one bank to the other, we were able to observe the wildlife about us. The most numerous were the terrapins, which kept diving at our approach.

From the overhanging undergrowth of the banks, parrots, macaws, and other birds rose to alight in the trees to chatter and scream. The sandbars were dotted with small gulls and here and there huge cranelike birds sauntered off as we neared. In the deeper bays large black Muscovy ducks were busy feeding, along with an occasional otter, and from the muddy banks an alligator would slide lazily into the water. Each time we got near some living thing Nilo's excitement would increase and he would insist that we stop and shoot. The Indians, as always, were armed with their bows and arrows, and the rest of us had our pistols in addition to a shotgun and a 44-caliber Winchester rifle.

After 3 hours we came to the tributary which led to the Camayurá village. The tributary, in contrast to the Kuluene, was deep, clear, and slow-flowing. We were now in the private domain of the Camayurá, as numerous fish dams and weirs could be seen along the banks. After another half hour the water became too shallow to operate the motor, and from there on we poled along an ever-narrowing channel with overhanging vegetation. Soon voices could be heard and we found ourselves near a bank crowded with boys and girls who had been warned of our approach by the motor and had come to meet us. After the boat was unloaded, the boys and girls picked up our things and we took to a narrow path which led us through woods and open patches of flood plain. As we neared the village we saw trees along the path on which were carved designs which we later found were symbols of *mama'é*, or spirits.

Suddenly the roofs of Tuatuarí could be seen over the second growth which surrounded the houses and in another minute or two we were in the village shaking hands and exchanging salutations with the Camayurá. Tamapú led us to his house outside of which his young wife and the other women of the house were busy baking *menyú* (manioc cake) and roasting sweetpotatoes. Young men and women painted with urucú and genipapo crowded around us asking for "rapadura." Offering cigarettes, I observed that the young men refused, whereupon Leonardo explained that only the old men who had had shamanistic experiences smoked. After we had ceremonially eaten *menyú* and sweetpotatoes we ate our K-rations and set up our hammocks.



Leonardo then set about attending to the sick. We found that about 75 percent of the villagers had "grippe." Whether this is a form of influenza or just a bad cold I do not know. It certainly affects whites worse than a common cold and among Indians it is a major killer. In any case, a dozen or so of the older people were hammock-ridden and running high temperatures. While Leonardo went from house to house taking temperatures, feeling pulses, and administering aspirin, Fernando and I had time to look over the village.

#### THE VILLAGE (IRETÁM)

Built on the edge of the forest belt which rises abruptly above the flood plain, Tuatuari is surrounded by forest except to the south where it overlooks a broad stretch of flat, grassy plain covered by water during the rainy season. At first sight the houses look like huge dome-shaped haystacks set in a circle around a plaza about 100 yards in diameter. On closer examination, however, it becomes clear that the six large houses differ in shape, one actually being rectangular with a gable roof. More or less in the center of the plaza is the small half-built rectangular flute house. As it was still without a roof, the flutes were kept in one of the other houses. Young men, however, painted themselves in front of this house and nearby we observed them wrestling. We were thus not able to obtain a full account of the flute house and its function among the Camayurá. At the back of the houses were platforms 4 or 5 feet high used for drying balls of grated manioc and rectangular babracots for broiling fish. The platforms and babracots, however, are not permanent structures but are put up when occasion demands.

While the plaza is kept clear of weeds and litter and is beaten hard by the constant passage of the people, the area surrounding the village gradually merges into the second growth where gardens once spread, and later into the cultivated fields and finally into the virgin forest some 300 or 400 yards away. Near the village grow gourds, calabashes, cotton, and urucú, particularly along the paths that lead to the fields and to the river. Firewood is obtained from the garden clearings, where the fires never consume all the timber felled, and water is obtained from the river. In the dry season the river is about 30 minutes' walk from the village,

but during the rains the river is only 200 yards distant.

These first impressions and elementary facts Fernando and I were able to gather before dusk. After the sun had set, Tamapú invited us to gather at a fire lighted in the center of the plaza around which the old men gathered to discuss plans for the following day. Low stools carved in the form of birds were brought near the fire for us to sit on. Long native cigars were rolled by the old men, lighted and puffed, while Leonardo in his broken Tupí explained that the sick should accompany us back to Jacarei for further treatment. After a couple of hours of discussion everyone retired to his hammock, and as there was little room in the houses for all of us I agreed to sleep out. Nilo obligingly set up two posts on the edge of the plaza for my hammock. For a long time I could not go to sleep, for never in my life had I heard so much coughing and hawking. It seemed that all the hundred or more people were coughing. It was a clear moonlight night, and I remember partly waking and thinking to myself that I must get up and turn off that electric light.

#### THE HOUSE (HOK)

The next morning while the Camayurá were making preparations for the journey to Jacarei we were able to make a closer examination of the village and the houses. The information gained on this trip, amplified by future studies, enables us at this point to give a general account of the Camayurá house and its construction.

Although most of the houses are ellipsoidal in ground plan, the rectangular type also occurs. It was difficult to determine whether the rectangular form of Tamapú's house and the half-built *jakui*, flute house, are original Tupian forms, for they have been built since 1947 with the assistance of the Expedition. However, as the majority of the Camayurá houses are ellipsoidal, as among the other Upper Xingú tribes, we are safe in assuming that this is the predominant house form. About the shape of these ellipsoidal houses we might also add this: the smaller the house the rounder it becomes. On the other hand, as the house increases in size it goes through a true ellipse to straight-sided house with rounded ends. This may show a development from a small beehive-

type house to one which is basically made up of two beehive-type houses connected with straight walls and a gable roof.

Owing to the frequent occurrence of accidental fire, the houses do not last long. As sickness and death may also be attributed to the house, the owner may burn it and build another. The houses vary considerably in size. The largest house in Tuatuarí is 60 feet long, 30 feet wide, and about 20 feet high; the smallest 48 feet long, 18 feet wide, and about 18 feet high. Ignoring Tamapú's house, which is built like a Brazilian rancho—that is, with stake walls and a gable roof—the others conform to a basic structural plan.

First, the builder sets up the two central uprights which support the heavy ridge pole. These uprights are about 8 or 10 inches in diameter and are sunk into the ground to a depth of 2 or 3 feet. If the house is to be very long, 3 uprights may be used. Next he sets up the wall posts about 2 feet apart except for the doorway where an opening 3 feet wide is provided. These posts, which average 4 inches in diameter, are sunk into the ground, making a wall about 5 feet high. To the tops of the wall posts the builder then laces heavy plates going horizontally around the building. The slender rafters are now laid. Along the sides of the building they are laid parallel to one another from 2 to 3 feet apart; they are fastened at the upper ends to the ridge pole and at the lower ends to the wall plates but are permitted to extend down to the ground about 2 feet beyond the foot of the wall. The rafters forming the rounded ends of the building come together at the top and are secured to the end of the ridge pole. To the underside of the rafters extra poles are lashed about 6 feet apart, going horizontally around the roof. To strengthen the entire framework two pairs of cross beams were set up at each end to the uprights in the form of a cross, the upper ends being lashed to the rafters and the lower ends resting on the ground near the walls.

The whole frame is now covered with grass thatching, called "sapé" by the Brazilians. With the help of assistants the builder takes long slender poles about an inch in diameter and over each he bends a layer of sapé. As the grass is about 4 feet long, each pole will carry a layer of grass about 2 feet in width. Beginning from the

ground these grass-covered poles are lashed to the rafters horizontally all the way around the building except for the two doorways. Then another set of poles is similarly covered by sapé and laid over the first band but about 8 inches above, all around the building. This process is repeated until the entire building is covered from the ground to the ridge. At the ridge one side is allowed to overlap the other by about 2 or 3 feet, providing an opening for the escape of smoke but at the same time preventing the rain from entering the house. The sapé is thus laid onto the frame like shingles, the only difference being that instead of narrow shingles each sapé-covered pole serves as a shingle.

As the rows of thatching overlap about 22 inches, the outside gives an appearance of a solid mass of grass about 2 feet in thickness. On the inside, the closely packed, smooth rows give an impression of neatness and finish to the house, especially in old houses in which the smoke has turned the thatching to a shiny black. Sapé is by far the best thatching. Occasionally palm fronds of various kinds are used but they do not last long. A good sapé roof, on the other hand, lasts for many years. During the dry season part of the thatching is removed to let in light.

In a completely covered house there are two doorways, one on each side. These low doorways are placed opposite one another, providing a passageway through the middle of the house. Doors are made by lacing together a layer of buri palm frond stalks. In cold weather and during storms the doors are closed. Doors are also closed when the head of the house does not wish to be disturbed or wishes to show his displeasure; and the women and children are behind closed doors when the sacred flutes are played.

Although considerable freedom seemed to exist as to where the occupants placed their hammocks, the prevailing custom was to sling hammocks from the two uprights to the wall posts at the ends of the house. Hammocks thus radiated in a semi-circle from the uprights to the rounded end walls, leaving the center of the house free for movement. In large houses 5 to 8 hammocks could thus be slung, and as the wife always slings her hammock under that of her husband, from 10 to 16 people could thus be accommodated at each end of the building. Infants sleep with their mothers, but



grown children have their hammocks slung near those of their parents. It is the task of the wives to keep fires going all night both for heat and to keep away the mosquitoes. These small fires are built next to the woman's hammock so that she can replenish the fire without getting out of her hammock. As the burning wood crackles and the people sleep naked, body burns are very common.

Each family keeps its personal belongings near its hammocks. Bows usually lean against the wall near the head of a man's hammock. The arrows are stuck into the thatching over the wall plate with the feather end protruding ready to be pulled out at a moment's warning. Gourds containing piqui oil and baskets containing feather work or twine are suspended from the wall plate or rafters. The center of the house is a common space to all the occupants. It is where women jointly process manioc and the large pots used for boiling the mash are placed, although in dry weather manioc processing and cooking are also carried on outside. In large houses a heavy beam is lashed to the two uprights well above head height and from this beam are suspended burden baskets containing additional gourds and small pottery vessels, dried seed corn, masks, feather head-dresses, buri fiber, dancing skirts, and other ceremonial gear. Dried manioc tubers, dried fish, and large gourds containing manioc meal are stored against the walls in the central part of the house in large burden baskets.

House building is always an affair in which the whole village participates. The task of collecting the poles, sapé, and lashings falls to the future owners, usually a group of brothers. When the building materials are gathered at the village, all the men participate in the actual construction. While the building is going on, the women of the house group prepare food for the builders and after the house is completed a feast is given in which everyone takes part.

The house posts have a *mama'é*, guardian spirit, called *tarawí*. He is guardian of the house group. If many people die in the house *tarawí* sends a strong wind, called *alsikí*, which blows down the house or gets *tatatuariáp*, the *mama'é* of fire, to destroy the house. Sometimes *tarawí* makes his anger known to a *payé*, shaman, who then instructs the people to burn their house and build a new one.

#### GENERAL OBSERVATIONS

On this, our first visit to Tuatuarí, we had the opportunity to make certain general observations about the people which, amplified by future observations, will be summarized here. It must be mentioned at the outset that a certain amount of intermixture has taken place among the Upper Xingú tribes for a long time. Among the 110 Camayurá were 5 Suyá women captured in raids, 2 or 3 Waurá women and 1 Mehinácu woman, the wife of Tamapú, obtained in marriage, 3 or 4 Waurá men who had married Camayurá women, and 2 Juruna men. These individuals could be distinguished from the Camayurá proper. The Suyá women were shorter than the Camayurá women and had larger, more pendulous breasts. The two Juruna, who were brothers, had been captured when boys from the Suyá, who in turn had taken them from the Juruna. Both were short, powerfully built men with green eyes. The number of individuals of mixed blood was not ascertained. Nilo, for instance, was half Suyá. It was determined, however, that people with Suyá or Trumai blood did not have the social status of individuals of pure Camayurá descent or those who had Waurá fathers or mothers.

As an expedition from the Museu Nacional in Rio de Janeiro had taken physical measurements of the Camayurá in 1947, it was considered inadvisable to repeat this work. Pending the publication of the measurements taken by the Museu Nacional, there are available at present the measurements taken by the Von den Steinen expedition in 1887. (See Appendix 3, table 1, p. 131.)

Body hair on both men and women is scanty and is carefully plucked out when it appears. Men also pull out facial hair. Head hair is black, thick, and straight, although a few individuals show some waviness. Men cut their hair in a circle over the ears, and the women cut theirs across the forehead, leaving the rest to fall on their shoulders. Married men are tonsured, having a small round bare patch on the top of the head.

Both teeth and eyes deteriorate rapidly so that middle-aged individuals seldom have their upper incisors. Conjunctivitis and perhaps other eye ailments are common. Two men each had cataracts over one eye.

In contrast with the men, the women appear squat and ungainly. Mature women have little or no waistline, the torso being straight-sided. The stomach protrudes, and the pelvic region appears narrower than among white women. The legs are short and slender. The breasts of the women are round for a short period after puberty after which the dark area around the nipple soon becomes conical, with the nipple forming a sharp point; with age the nipples enlarge so that they include the entire dark area and hang down loosely. The breasts appear triangular in shape and are located well to the sides so that a woman can put them under her arm if necessary. Both sexes have small, rather broad feet and walk with the toes turned inward. Comparing their feet with ours was a source of great amusement to the Camayurá. They did not seem to understand that our toes were crowded together because we wore shoes, and they liked to show how their toes stood out separately even when their feet were free from the ground.

There were no fat or extremely thin individuals among the tribe, nor were there any individuals with gray hair. Only one woman appeared to have reached the age of 60, although an old man who died in 1947 claimed that he remembered the Von den Steinen expedition.

Excepting scarification, which leaves temporary corduroylike scars on the arms and legs, and the piercing of the ear lobes, there is no other form of body mutilation. It was said that on long voyages in the woods the men wore a penis sheath for protection.

Although the women wear a triangular ulurí over the pubic bone which, however, does not cover the pudenda, they are careful not to display themselves. They sit on one leg and hold the knee of the other leg in front of them. Although women generally wear an ulurí they do not feel ashamed without one. The only permanent article worn by men is a string of beads around the waist or, lacking beads, just a thin string made from burití fiber.

By 10 o'clock the morning after our arrival we left Tuatuarí, following a long line of naked brown bodies that wound its way over the open flood plain toward the river. The sick who were not able to walk were carried in their hammocks. Only a few families remained in the village. At

the river there was considerable argument for everyone wanted to crowd into the boat. Eventually Leonardo and Tamapú selected about 30 of the weakest to accompany us, the rest being told to follow in canoes.

While the boat was being loaded I was able to observe the baggage which the Indians took along. Every man, of course, carried his bow and arrows. In addition, others carried small rectangular baskets in which they kept the twine, rosin, and other materials necessary for arrow making. Several carried manioc sieves, in the folds of which they had put large mutum and vulture feathers used for feathering arrows and for making headdresses. Everyone had his or her hammock and each family had a large openwork burden basket filled with dried manioc tubers, gourds filled with manioc meal, broiled fish, and dozens of baked *menyú*. Many of the children carried their pet parrots or parakeets in temporary baskets made from green rushes.

On the journey down the Kuluene there was not much said, because the people were sick although some were well enough to eat. Now and then a mother would assist a child while it defecated or urinated into a gourd vessel. Men would dip drinking water from the river, but always smelled the gourd first to make sure it was not a chamber pot. Some gourds were lost because the men dipped against the wash, and it jerked the gourd out of their hands.

Three hours later we were back in Jacarei, and after the Indians had established themselves in several of the sheds the task of medical treatment began. For weeks the Villas Boas were busy giving injections and pills. The doctor of the Expedition had come from the base camp on the Rio das Mortes with additional medical supplies and for some days took care of the more serious cases. It was interesting to note how stolidly both adults and children took injections. In some cases large doses of calcium in liquid form was injected into the hip, and as the syringe would not hold the full amount the needle was left sticking in the flesh while the syringe was being reloaded and screwed back on to the needle.

The contrasts in the life at Jacarei were thus striking in the extreme. Here the very old rubbed shoulders with the very new. Naked Indians practicing an ancient culture were being



treated with penicillin, sulpha compounds, and other modern medication, a Piper Cub airplane nestled under the piqui tree in the center of the camp, and every night by radio we could tune in on the news from Rio de Janeiro, New York, or London, or could send messages direct to Rio and São Paulo as well.

As the Camayurá improved in health we began working with them, observing their everyday life and, with the help of Orlando, using first one and then another as an informant. On some days we accompanied the Indians on fishing trips, on others we followed them into the woods while they collected palm nuts, roots, and materials for making arrows. In return they watched us dress or undress, observed us eating, accompanied us as we took our daily baths in the river, and insisted on helping us with the innumerable tasks of camp life. After a month Tamapú and most of the Camayurá returned to Tuatuari, and a few days later we followed, to observe them preparing their fields, repairing their houses, fishing with timbó, dancing, and wrestling—not to mention the details of domestic life.

We began our study by describing their economic life, by observing what they ate and how they went about obtaining, processing, and preparing their food products. The year-round staple foods, we soon learned, were manioc and fish, with various fruits, nuts, and terrapin eggs being used as they came in season. Meat formed a negligible part of the diet. We also learned that myth, magic, and religion are essential elements in economic activities. In the following pages these beliefs and practices are described as integral parts of the economic process.

### AGRICULTURE

The following account of the agricultural activities of the Camayurá is based upon information gathered during the dry season, in other words, at a time when these activities were at their lowest ebb. This limited the direct observation of the full list of crops planted and the practices of cultivation. However, by observing what the people ate, what they had in storage, what was growing around the village, and what they were preparing to plant, a considerable amount of information

was obtained. It can be said with assurance that the staple food crops include bitter manioc, sweetpotatoes, maize, and peanuts. Of these, manioc is by far the most important, for it is eaten the year round. No beans or squashes were seen and only once was a woman observed peeling cará tubers. Among the fruits, the piqui and mangaba are of great importance. A few banana plants were seen near the village, and also such nonfood plants as cotton, tobacco, urucú, gourds, and calabashes. From the forest the Camayurá collected bocaiuva palm nuts, coco babão, and tender palm shoots. Gray ashy-looking salt made by burning some marsh plant was observed. No doubt other plants are grown and other forest products collected for food, but the language difficulty made it impossible to question the Camayurá about them.

During the months of August and September the sky above the village is dark with the smoke of their clearings and one can hear the blows of the ax and the crash of falling trees in practically every direction. Shortly after sunrise groups of men and boys are seen going to the fields carrying tools, gourd vessels of manioc gruel, and cigarettes. The tools used today are the steel ax, the iron hoe, and the machete, which the Camayurá have obtained by barter from the Indians to the south, who, in turn, obtained them from the Indian Service Post on the Batoví River. During the last 2 years the Roncador-Xingú Expedition has added greatly to the supply of metal tools. Even yet, however, not every family has a complete set of tools, but as the field work is generally performed cooperatively, most of the tools tend to be used in one or two fields at a time. Old stone axes and digging sticks are still in existence but are kept more as heirlooms than as implements of use.

Clearing and planting go on more or less simultaneously. Even before the fires in a field have actually died out, manioc cuttings are set out among the stumps and half-burned trunks. Agricultural activity increases in tempo as the rains approach in mid-September. Sweetpotatoes, maize, and peanuts are the last to be planted. By this time the manioc cuttings have already begun to put out leaves and the task of weeding has commenced. Once the plants have a good

start they are left to grow without further weeding. But the Camayurá does not forget his field. He watches it closely for signs of disease and blight. If the field becomes "sick" he will practice garden magic to cure it. Even during planting, offerings are made to the spirits of the manioc plant.

During the month of December when the garden plants are in full growth, the Camayurá leave the village of Tuatuarí and go to the old village of Ipavú for the piqui harvest. Here they settle for a month or two, repairing their houses, fishing in the lake nearby, eating fresh piqui, and preparing piqui pulp and oil for storage. At the end of the piqui season they perform the piqui ceremony after which they return to Tuatuarí for the garden harvest.

Like the planting season, harvest time is not an exact period but begins when some of the crops are ready for use. Maize comes in early, followed by sweetpotatoes. Manioc is ready for use after 7 months, but is left in the ground until needed. Even during planting time in August people were seen pulling up last year's manioc plants. As a rule, new crops come in during March. In April and May large quantities of manioc roots are grated and pressed into balls ready to be ground into meal. The rains end in April and, with the coming of clear skies and with an abundance of food, begin the ceremonial season, visiting, trading, and—until the coming of the Roncador-Xingú Expedition—warfare.

This, in brief, is the annual cycle of agricultural activities. Although the dry and rainy seasons are clearly marked, moisture conditions in the low-lying lands are such as to permit planting long before the rains come. The seasonal variations in temperature are small. These physical conditions, therefore, do not demand exact timing in the annual cycle of work, for planting can be carried on for 3 months and harvesting even longer. In fact, there is manioc in the ground ready for use throughout the year just as there is a continual supply of fish in the river. Storage activities thus are of minor importance and food is prepared in large quantities only for ceremonials and long voyages. Let us now examine more closely the even rhythm of agricultural activities in order to see how, in detail, they clear the fields, plant the crops, and harvest the produce.

## MANIOC (TEMIŨ)

A statement to the effect that manioc is the principal food crop of the Camayurá indicates only in a minor way the role which this food plant plays in the lives of the people. It is only after one has observed the activities involved in its cultivation, the methods of preparation for consumption, its use as food, the ritual surrounding its cultivation, and has heard the myth celebrating its origin, that one begins to understand the Indian's attitude toward manioc, to grasp its real value and meaning as a culture trait.

When a visitor comes to Tuatuarí and after the chief has shown him the place where he can pitch his tent or hang his hammock, the chief's wife will pay a formal visit, presenting him with a thin circular manioc cake called *menyú*. Later, other important women of the village will approach, giving the same present. In all their nakedness the women will squat in front of the visitor as he eats some of the *menyú*, eagerly watching for some sign of appreciation in his face. At first the white visitor does not realize that this is a ceremonial act, that the people are offering him the very best they have in the form of food, for this baked cake is not the ordinary kind but is made from a mixture of meal and the fine starch flour which is obtained only after long, arduous labor. Once the white visitor realizes the significance of this act he will show his appreciation by eating the soft, sweet cake, still warm from the baking plate.

After several visits the white man will observe that all important guests are offered this special *menyú* and that considerable skill is required in getting the right texture and in baking it so that it is slightly browned on one side and left white on the other. He will also hear native comments about the women who are considered to be the best bakers, that women take great pride in this task, and that, usually, the chief's wife is accorded the honor of being the most skillful baker in the village. As he watches the women at work, he will notice that it is manioc which they are peeling, grating, pressing to remove the juice, rolling into balls, drying, grinding in graters, sifting, and baking into *menyú*, and that these tasks keep them occupied most of the day. He will observe that the central part of the house is always reserved for this work or special sheds are attached to ac-



commodate the array of huge flat pots required for the processing of manioc and the preparation of manioc meal and flour. He will also notice that it is *menyú* which the men eat before going to their field work in the morning, which the fisherman, hunter, or traveler takes on his journey, and which the children eat during most of the day as a sandwich made by folding a piece of *menyú* around a slice of boiled or broiled fish. During the ceremonial season in May great quantities of manioc are prepared and served, not only as *menyú* but in the form of gruel mixed with sweetpotatoes and fish or boiled down to a thick gelatinous paste.

The Camayurá are never weary of talking about their manioc fields and their stores of dried manioc meal. Some families are specialists in growing and preparing manioc products and these specialists will visit their friends in other tribes, assisting them in growing or working manioc for which they get a portion of the product. Some night when the visitor sits with the old men around the fire in the center of the village smoking long cigars of native tobacco rolled in a leaf, someone will tell him of how manioc came to the world and how nearly the Camayurá came to losing this gift of the gods.

Long ago, after Mavutsiné, the creator, had made the forefathers of the Camayurá out of *camiuva* wood, he observed that they were hungry because they had no food. Mavutsiné then picked up a gourd and after pinning a feather on each side, began blowing tobacco smoke over it. As he blew, the gourd began to move and little by little it grew until it turned into the gull, *Pakoin*. "Go and make a field of manioc for the Camayurá," said Mavutsiné. *Pakoin* then made a long cord of great strength to which he fitted sharp stones to form an edge. This cord he threw around the forest, and when he pulled the cord he cut down all the trees. He set fire to the felled trees and for many days one could not see the sun, for the smoke was so thick. When the field was clean, *Pakoin* went to the river and called "pirarará," the dog-fish. When "pirarará" appeared *Pakoin* told him to take his friends, the fish, and plant a field of manioc for the Camayurá. All night long the fish worked. In the morning the field was planted. *Pakoin* then told the Camayurá to guard the field against wild animals and to keep it weeded.

The manioc began to grow, and it grew and grew until it was very tall, and green, and beautiful. The storyteller's face will light up at this point as with word and gesture he tries to convey to the listener the size and beauty of this first great field in the mythical past of his people. His audience will mutter their assent. But the next instant their heads will bow down in shame and sadness for the storyteller goes on to say that the Camayurá became careless in their pride, for they neglected to guard the field. One night *capimá*, the deer, came and destroyed the field. Next morning there was nothing but trampled earth, not a stalk or a root or a leaf remained. When *Pakoin* and the fish saw what had happened they were very angry with the Camayurá and told them to kill the deer. The Camayurá killed the deer, and they still hate and kill deer but they do not eat its flesh. The Camayurá were very sad and walked over and over the field searching to see if anything was left. Eventually an old Camayurá found just one little piece of stalk in a far corner of the field. From this little piece the Camayurá planted a crop and it is from this field that all other fields have originated. But they will hasten to say that no field has ever grown so tall and beautiful as that first great field planted by *Pakoin* and his fish helpers.

Next morning when the visitor again observes the men at work in their fields, and watches the women busying themselves around their pots, graters, and sieves, and sees long rows of snow-white balls of manioc drying or stacked in baskets in the houses, he might well say to himself: truly manioc is the staff of life of these people.

The manioc which the Camayurá use is the bitter variety (*Manihot utilissima*) native to tropical South America. No plantings of sweet manioc were seen. The field is cleared with the ax (*yí*), and the branches of the trees are cut up for firewood and carried to the village or are left to dry near the edge of the field. The large trunks are then burned. No attempt is made to dig out the half-burned stumps. When the fires have died out, the field, *ko*, is ready for planting. Fields vary in size according to the needs of a family. The fields observed varied from  $\frac{1}{2}$  to 1 acre in extent, the shape being generally circular.

Manioc is planted in hills or mounds (*manitúm*). While one man is cutting last year's manioc stems

into pieces about 10 inches long, another is hoeing up a round hill about 3 feet in diameter. When the hill is completed, the man with cuttings pushes 9 or 10 pieces into one side of the mound, leaving about 4 inches showing above ground. The cuttings are placed close together and are covered by hand. This process continues until the field is planted. The mounds are about 5 or 6 feet apart, and as the cuttings are placed on an angle on the same side of each mound, the whole field gives one the impression of a cornfield after a strong wind. Although the Camayurá give no reason, the slant of the cuttings is in a westerly direction. However, once the manioc plants begin to grow they assume an upright position.

Manioc, as has been mentioned, is a food crop of primary importance to the Camayurá. A crop failure, naturally, would result in a food shortage and consequent hardship to the people. Manioc fields, they are aware, are threatened by enemies. Insect pests, deer, and wild pigs can destroy a field. The plants sometimes do not grow well, possibly because of poor soil or drainage or some form of blight. To protect their fields against these evils the Camayurá resort to magic. The fortunes of men, animals, and plants, they believe, are controlled by spiritual beings called *mama'é*. All plants and animals that are of real concern to them have guardian spirits whose assistance can be solicited.

Manioc has three of these *mama'é*, called *ihít*, *ivirát*, and *ivét*. These spirits are not anthropomorphic, nor are they considered the souls or spirits of the plant itself. They appear to be, rather, guardians of the manioc plant. Although the Camayurá were at a loss to explain the appearance of these spirits, they were quite clear as to their symbolic representation. In the village of Tuatuarí there is a man by the name of Turutsí who has three wooden posts, on each of which a *mama'é* is painted. The symbol for the *ihít* is a T about 12 inches long and 1 inch in diameter; the symbol for the *ivirát* is three vertical lines about 36 inches in length; and the symbol for the *ivét* is a half-moon about 6 inches long. What is singular about these symbolic drawings is that not only the names but the forms themselves resemble the three tools closely associated with the cultivation and preparation of manioc for food. The word *ihít* is used for the hoe and the symbol bears

some resemblance to it; the word *ivirát* is used for the digging stick which is used in digging up the roots at harvest time—the three lines look like three digging sticks; the *ivét* is the *menyú* turner, a flat half-moon-shaped piece of wood which all women use for turning over the flat cakes of manioc meal when they are baking on the cooking plate over the fire.

It would be a mistake, however, to consider the hoe, the digging stick, and the *menyú* turner as religious symbols. Only the sacred posts on which these objects are painted represent the *mama'é*. The Camayurá have only these three posts, which are the property of the whole tribe although kept in the house of Turutsí.

After a field has been planted, the owner of the field, usually the head of an extended family, makes an offering to the three *mama'é* of manioc by placing a gourd bowl of *mohét* (mashed sweet-potatoes boiled in water) before each of the three posts. This is believed to assure the good will of the spirits and the protection of the field. If the manioc plants do not grow well, "the field is sick," as the Camayurá say; they will then take the three posts out to the field during the night and the owner and his friends, usually shamans, will smoke tobacco around the posts calling on the *mama'é* to cure the field.

The Camayurá also believe that the field may become "sick" as the result of witchcraft practiced by some enemy, quite often an Indian of a neighboring tribe. The owner of the field will, in this case, call on his personal *mama'é* to reveal the cause, which is usually a small object which has been injected into the field by the sorcerer. The *mama'é* will show the man where the evil object is hidden so that he can remove it from his field.

The technical control over manioc production in the eyes of the Camayurá is in no way commensurate with food and the ritual value of manioc. Not only is manioc the basic year-round food supply but it is the food offered visitors during the ceremonial season which opens at the end of the rainy season. The anxieties arising out of the uncertainties accompanying manioc production are, at least in part, compensated for by an appeal to supernatural help. The anxiety is further emphasized by the origin myth of manioc.

After about 7 months, manioc is ready for use and the owner and his family go into the field to



harvest the roots according to their needs. First the husband pulls out the stalk and then the women and children dig up the roots with digging sticks. The roots vary in size from 6 inches to as much as 3 feet, 18 inches being an average size. The large tubers are tied into a bundle and the smaller ones are placed in a rectangular basket, *iripari*, about 3 feet long by 2 feet wide and 6 inches high. The bundles and baskets are then carried back to the village on the heads of the members of the family. If manioc is to be prepared for a ceremony or for a voyage, large quantities are dug up. It is customary, however, to leave the manioc in the ground until required. If deer or wild pigs threaten the field most of the tubers will be taken from the ground and stored after drying.

#### PROCESSING

Whether the task of preparing manioc is performed in the central part of the house or in an adjoining shed depends upon the size of the house and the availability of space. A small overcrowded house does not allow enough room for the large pots, baskets, graters, and sieves necessary for the work. A roof over the heads of the workers, of course, is necessary to provide shade in the dry season and to shed rain in the wet season. Once the tubers are brought in they are deposited near the large flat pots which are the principal items in the round of processing activities.

As there are three different tasks in the general processing of manioc, it is customary for three women to work together. The first woman peels the tubers by scraping off the dark-brown skin with a shell knife or scraper, *itá*. Seated on the ground before a bundle or basket of tubers, she takes a tuber and holding it upright, with one end resting on the ground between her thighs, she scrapes downward until the tuber is clean and white. The peeled tuber she then places upright in a pot half-filled with water to keep the tuber moist.

The second woman, who performs the grating, is seated before a larger pot, roughly 2 feet in diameter, over which she places the grater, *ivehé*. The grater is a wooden board about 3 feet long and 9 inches wide at each end, narrowing toward the center to a width of about 6 inches. In the central part of the board, covering an area of about 18 inches long and 6 inches wide, are embedded the

fine teeth for grating, which may be of shell, thorn, fish teeth, or spikes made from tucum palm thorns. It is customary for the woman to place the pot before an upright house or shed post so that one end of the grater is braced against it while the other end is held against her abdomen. She then takes a peeled tuber and, holding it upright in both hands, rubs it back and forth over the teeth until it is reduced to shreds. Periodically she dips the tuber into the water pot and sweeps the pulp from the grater into the pot below it with her hand. When the pot is full she adds cold water and stirs it so that the water and pulp are thoroughly mixed.

The third woman, who does the pressing, is seated before a still larger pot over which are placed 3 narrow strips of bamboo on which is spread the sieve, *tuavi*. The sieve which is about 24 inches long and 16 inches wide is made from thin strips (one-eighth inch in diameter) of buriti palm leaf fiber woven together with cotton twine at intervals of 2 to 3 inches. The sieve thus looks like a reed mat; it can be rolled up or folded laterally but not longitudinally. The interstices are close enough not to permit bits of pulp from falling through but far enough apart to allow the juice and fine sediment to fall into the pot below.

The pot over which the processing is done is near enough to the grating pot so that the woman performing the pressing can reach it while seated. With the gourd dipper she takes out a quart or so of the wet mass and places it on the sieve. She spreads it evenly along the surface and then folds one side of the sieve over it. She then begins to squeeze the sieve with her hands, moving along the roll several times. She then rolls the sieve tighter and again squeezes along the roll. She continues until she can expel no more juice. After unrolling the sieve she takes the white moist mass and rolls it into a round ball, which is then placed on a round basket tray to dry. If the quantity is large, the balls may be placed on a platform. Some women, instead of rolling the pulp into a round ball, separate the long sausage-like roll of pulp into four parts and press the pieces together to form a segmented block showing the pattern of the sieve on the outside.

After several days in the sun and wind the balls are dry and ready to be ground into meal for making the flat pancakelike *menyú*. The pulp, either moist or in the form of dry balls, is known

as *tiburati* and is the basic storable and transportable manioc product. While drying, a red fungoid growth sometimes appears on the balls but is not considered harmful. Large quantities of dried balls are stored in carrying baskets (*pirapuita*), covered with leaves, and stacked near a wall in the house.

Another way of expelling the poisonous acid is by simply drying the tubers. The tubers are first peeled, but instead of being grated and pressed are dried near a fire. When thoroughly dried they can be stored in baskets or can be ground directly into meal in a mortar. By preparing manioc tubers in this way, of course, the by-products of juice and starch are not obtained. Dried tubers are known simply as *temiu*, the Camayurá word for manioc.

The third basic product of manioc processing is starch flour, *tibuák*. The juice which has been expelled from the grated pulp is a whitish liquid which contains manioc starch in suspension. When permitted to stand, the starch settles on the bottom of the pot, and after the water is carefully poured off, the starch can be dried. When thoroughly dried the fine starch flour is ready for use. This flour is not made in large quantities and is usually kept in a small gourd vessel. The juice is generally boiled for hours in a huge pot or cauldron to remove the acids. This boiled juice (*mohét*) can then be drunk, or boiled still further to form a thick starch pudding, or boiled with fish or sweetpotatoes.

In review, one might say that there are four basic manioc products from which food can be prepared: (1) the dried pulp, either in the form of balls or ground meal, *tiburati*; (2) the dried tubers, *temiu*; (3) starch flour, *tibuák*; and (4) the juice containing the starch, *mohét*. The manner in which food is prepared from these products will be discussed later.

#### SWEETPOTATOES (YETÍK)

If manioc is the bread of the Camayurá, then the sweetpotato is their vegetable. At any hour of the day women and children can be seen roasting the tubers in hot ashes or eating them while occupied with household duties or at play. As a token of friendship a boy or girl will run up to one,

break a hot sweetpotato in two and offer a steaming half.

The sweetpotato (*Ipomea batatas*) grown by the Camayurá appears to be the white variety that is found in the markets of Brazilian towns. The tubers seen were rather small, averaging about 4 inches in length. The slips are planted (set out), just before the rains, among the manioc plants, usually in the part of the field nearest to the village. Small patches of sweetpotatoes were also observed growing near the houses on land that had been fallow for a long time. After 5 to 8 months the tubers are large enough to eat, and the women and children go to the fields to dig up what they need for the day, carrying them to the house in large flat baskets.

Although an important food article, the sweetpotato does not play the same role in the life of the people as manioc. As far as could be ascertained, the sweetpotato does not have a place in mythology nor does it have special guardian spirits to whom offerings have to be made. If sweetpotatoes do not grow well, the owner may decide that an enemy has injected some evil object into the field and he will smoke over it and eventually remove the injurious object. This act, however, is a general magical act of curing and not special to sweetpotato cultivation as such.

#### MAIZE (HAWATSÍ)

Maize, although grown by the Camayurá, does not appear to be as important a food item as manioc and sweetpotatoes. Whether this fact is due to custom or climatic conditions is not clear. Among the Bacairí to the south, maize is of great importance as a food and plays a role in myth and ceremonial.

The maize (*Zea mays*) grown by the Camayurá has a long slender ear (12 inches), the yellow and brick-colored kernels lie in regular rows along the ear and average about three-eighths of an inch in width. The dried kernels appear much softer than those of the maize grown by the Brazilians.

Maize is planted at the beginning of the rains. The planter walks among the manioc plants, making holes in the ground with a pointed stick, and is followed by another who drops three seeds into the hole and covers the seeds with his foot. In March the maize is ready to pick. Some of the



ears are dried and hung on the beams of the house for next year's seed. During the months of June, July, and August of 1948, except for the dried ears of seed maize, no maize was observed among the Camayurá either stored or in the form of food. No beans or squashes were observed.

#### FRUITS

In addition to garden products the Camayurá produce two fruits—the "piqui" and the "mangaba." These fruits can be said to be cultivated insofar as the people plant the seeds from which they grow. No pruning or other care of the trees was observed. Brazilian naturalists claim that these trees have been brought to this region from the plateau, for they are seen only around the villages or growing in abandoned village sites.

The piqui tree, when mature, grows to a height of about 50 feet. The gnarled trunk and twisted branches give the tree a very rugged appearance. The leaves are large, dark green in color, and provide excellent shade near or in the village. The tree is planted from seed and requires about 10 to 15 years to reach fruit-bearing stage. The spraylike blossoms are pale yellow. The fruit is about the size and color of the avocado but is rounder and usually shows two segments which contain the two large stones or seeds.

The mangabeira (Portuguese for mangaba tree) which produces the fruit called mangaba, is much smaller, growing to about 15 feet or the size of an average plum tree. These trees, too, have been imported from the plateau. The mangabeira is a latex tree, the natives sometimes using the latex to make rubber balls. A cut on the bark or fruit at once permits the white milky liquid to exude to the surface. The tree, although gnarled as are most of the trees belonging to the semiarid plateau, has small leaves and a beautiful snow-white star-shaped flower. The fruits which appear to grow all the year round, are the size and color of a small apricot, being, like the apricot also, somewhat downy on the surface. The interior consists of a soft whitish pulp containing many small seeds and a refreshing cherrylike flavor. Both trees are found in considerable profusion around all the settlements that have remained located in one spot for a number of years.

The Camayurá attribute great value to the piqui, or *peke'i* as they call it. Piqui time is a

good time, everybody feels good, there is dancing, the sacred flutes are played, and offerings are made to the *mama'é* of the piqui tree. This attitude is undoubtedly associated with the nutritional value of piqui and its position in the annual consumption cycle. The piqui is known to have a heavy oil content and, although I have seen no chemical analysis of this fruit, its resemblance to the avocado should indicate, in addition, a rich mineral and vitamin content.

Extremely important, too, is the fact that piqui becomes available in December, being the first of the new year's food products. The tropical, warm-water fish are not particularly rich in oil, and manioc, as we know, is predominantly a starch food. Piqui, therefore, comes in during a dietary low in terms of fresh vegetable foods.

When the piqui fruits ripen they fall to the ground and are gathered up for processing. Around the village the gathering is done by women and children, but when the fruits have to be brought in from some distance men load them in wicker burden baskets and carry them to the village on their backs.

The following account of the methods of processing is based not on observation, but upon the statements of the Camayurá. When the fruits are brought in they are unloaded in the central part of the house where, as we have seen, manioc is processed. Many of the same implements are used. The women split the fruit with a shell knife, remove the skin, and place the pulp in a large pot. A little water is added and the whole mass, still containing the seeds, is boiled until the pulp separates from the seeds. The oil, *imí*, which arises to the surface is skimmed off and stored in narrow-necked gourd containers. When the pulp cools the seeds are removed and left to dry. The pulp is then pressed in the sieve, *tuaví*, after which it is ready to eat. If large quantities are prepared the pulp is wrapped in leaves, placed in baskets, and put under water where it will keep for months. If kept under water for a long time the pulp becomes sour but is still considered edible. The piqui nuts are opened and the kernels are eaten, roasted or unroasted.

Like the manioc plant, the piqui tree is surrounded by ritual, and, like the manioc, has three guardian spirits, or *mama'é*. Perhaps the most important is *mavurawá*, for a ceremony is per-

formed for it during the piqui harvest. *Mavurawá* is represented by an insect with long antennae. *Kinemeú* also has the form of an insect but differs from *mavurawá* in having short antennae. Besides these two insectlike *mama'é*, the piqui tree has the bull-roarer, *urivurí*. The bull-roarer has an interesting legend. *Yanamá*, one of the first Camayurá created by Mavutsiné, obtained the bull-roarer from *aiká*, the mythical dogfish, in exchange for red toucan feathers. Later, *yanamá* gave the bull-roarer to the piqui tree in return for the knowledge of making piqui oil. The bull-roarer is shaped like a fish and is painted with red, white, and black bands.

These *mama'é* are intimately connected with the growth of piqui. If a tree bears badly the old men gather around it, smoke tobacco, and ask the *mama'é* to cure the tree and make it bear well. At the beginning of the piqui harvest, the Camayurá perform the *mavurawá* ceremony. The men and women paint themselves with urucú and genipapo and sing and dance in praise of the piqui tree. At one stage in the ceremony, processed piqui is eaten and *mavurawá* is said to come down from the tree and eat piqui with the people. *Kinemeú* and *urivurí* are also said to be present at the ceremony. When darkness falls the sacred flutes, *jakui*, are played and piqui is offered to them. Every effort is made to keep a small quantity of last season's piqui so that some of it can be offered to the flutes.

#### COTTON (AMANAYÚ)

In addition to the food crops just described, the Camayurá cultivate such plants as cotton, urucú, and tobacco. The native cotton which the Camayurá cultivate is a perennial, growing to a height of from 5 to 7 feet. Everything connected with cotton, from planting to processing, is women's work. Women plant cotton near the houses at the beginning of the rainy season, placing the seeds about 2 meters apart. The next May the bolls are ready to pick. Cotton is, however, picked only when required. Even as late as August women were seen picking cotton into small circular baskets. No mention was made of an origin myth or of guardian spirits associated with cotton.

#### URUCÚ<sup>1</sup>

Urucú is usually planted near the village on lands that have formerly been used for garden crops. This plant, which on the dry plateaus is a low bush, grows in the moister bottom lands to a height of 20 feet or more. The prickly, heart-shaped pods turn to a rich brown color when ripe, the interior being filled with red seeds. The seeds are removed from the pod and boiled in a pot until the hulls separate from the kernels. The fine soft kernels are then boiled until a thick red paste is formed. The paste is kneaded into a cake about 4 inches in diameter and allowed to dry. When required for use, a piece of the cake is broken off and mixed with water or piqui oil and applied to the skin or to objects which the people wish to paint. When mixed with water the painted surface is a dull red but when mixed with oil the surface is bright red. Boiled urucú seeds can also be mixed with food and eaten. Although urucú is used on all ceremonial occasions, it is also used almost daily by the young people for purely decorative purposes. Urucú has a special *mama'é* but the Camayurá offered no stories connected with its mythical origin.

#### TOBACCO (PETÍM)

One does not have to be among the Camayurá long to realize that tobacco plays a special role in their lives. Following the universal custom of offering tobacco in the form of cigarettes or Brazilian twist in order to enhance social interaction, we observed that only the old men would light up. The young men and women would take tobacco but would later pass it on to their fathers, uncles, or husbands. It was later learned that although shamans could smoke tobacco for pleasure, its primary use was in shamanistic rituals.

Manioc and piqui, for instance, have guardian spirits or *mama'é* which are represented by symbols. Tobacco, on the other hand, is itself the living representative of the *mama'é*. Tobacco is called *petím*, and *petím* is also the *mama'é*. Although no exhaustive analysis of native ideas about tobacco and attitudes toward it could be made, owing to linguistic difficulties, the general notions concerning it appear to be as follows: (1) Tobacco when smoked has the power to bring

<sup>1</sup> The same word is used in Camayurá.



the shaman into contact with the *mama'é* of men, animals, and plants; (2) tobacco has the power to inject harmful objects into the bodies of one's enemies or into gardens or objects such as canoes, bows, and arrows.

Tobacco, the Camayurá say, is the gift of *pituhá*, who taught the people how to cultivate tobacco and to use it in shamanistic rites. *Pituhá* is the "bemteví" (*Pitangus sulphuratus maximiliani*), a yellow-breasted bird about the size of a robin. This saucy bird with its cheery song is quite common in Brazil and is important in the mythology of the Terena. *Pituhá* is today a shaman, and the Camayurá claim that he can bring illness and misfortune to people.

The cultivation and use of tobacco is restricted to men. At the beginning of the rains men plant tobacco seeds around the edges of their manioc fields. After about 4 months the leaves are gathered and hung from a cleft stick to dry. Later the tobacco is cut into narrow strips, lightly rolled, and stored in small baskets. For making cigarettes the Camayurá use leaves from several varieties of trees. The central part of the leaf is first removed and the strips of leaf are rolled around the tobacco, new pieces of leaf being added until a cigarette about 10 inches long is formed. The end of the cigarette is tied with a piece of buri fiber. The cigarettes are pleasant to smoke, the leaf giving the tobacco a strange flavor.

### FISHING (PIRAREHÉ)

Fishing is a lifetime occupation among the Camayurá as among the other Upper Xingú tribes. As soon as a boy is able to handle a small bow and arrow he will accompany the men and stand on the bank of a stream, waiting his chance to shoot a small fish. Fishing continues to be his main task until age weakens his muscles and impairs his vision. Even old men, whose eyesight no longer enables them to shoot accurately, will use conical basketry traps in the shallow waters or just stand around giving advice to the others. Not a day passes without someone being out fishing, and as the fisherman enters the village with his fish strung on a vine or stick, a shout will go up from those who see him, announcing that fish is to be shared, cooked, and eaten.

It follows from this that fish is the principal

protein food of a Camayurá. He can get along for a day or two without his *menyú*, but to pass a day without fish is to have nothing to eat. Fishing is surrounded by beliefs and avoidances. A menstruating woman cannot eat, cook, or even touch a fish. For greatest success in fishing, a man should avoid sexual intercourse during the night before an important fishing expedition. He asks his personal *mama'é* to assist him in fishing. Some of the large scaleless fish represent mythical beings, like the *aiká* and the *uahú*, who planted the original manioc field. An expectant mother and her husband must avoid eating scaleless fish. Although individuals sometimes fish alone, one generally sees groups of two or three in canoes, some paddling, others standing ready with their bow and arrows to shoot promptly whenever a fish appears within range. Large fishing trips are arranged by the chief in which all able-bodied men and boys take part.

The Kuluene and Upper Xingú proper are plentifully stocked with many varieties of fish. In one catch of some 80 fish, 20 species were counted. In my experience these waters were the richest ever seen. Fishing in the main streams with hook and line for 1 minute was usually sufficient to catch a fish or to lose the bait from the hook. The larger fish appear to inhabit the deeper waters of the main streams where the muddy water makes them relatively safe from the arrows of the Indians. The favorite fishing grounds of the Camayurá are the headwaters of the smaller tributaries where the clear water makes shooting easier and where dams can be built. Small lakes or sloughs are also used, especially after the flood period, which leaves large quantities of fish trapped in these basins.

No effort was made to obtain a complete list of the species of fish used by the Camayurá. Only the commoner kinds can be mentioned. Perhaps the most common fish is one which the Brazilians call the "piranha." There appear to be two varieties in this region: one is the notorious "piranha" that is said to attack bathers, and the other is not dangerous to man. The dangerous one is the smaller, averaging about 2 pounds, being silvery bright and rather perchlike in shape. The larger variety is similar in appearance, but does not have the razor-sharp teeth of his dangerous companion. Both are edible and both are

called *pirará* by the Camayurá. Another fish which has a somewhat similar name is the *pirarará*. The reason for this similarity in names is not clear, for the *pirarará* is a large smooth-skinned bottom fish ranging up to 50 pounds in weight. When hauled into a boat this fish emits audible grunting noises. Its flesh is coarse and much inferior in taste to the others. Another basslike fish ranging from 4 to 5 pounds is the *uchurí*, or "cachorro" in Portuguese. It is called "cachorro," or dog, because of its long curved teeth. It is also edible but of inferior quality.

The three fish most highly prized as food by the Indians and the Brazilians are the *mandubé*, "fidalgo"; the *tucunaré*, "tucunaré"; and the *matrinchá*, "matrinchá". The "fidalgo" is a catfish with black stripes running from the dorsal to the ventral side. The "tucunaré," ranging from 4 to 6 pounds, is a scaly silvery white fish somewhat basslike in shape. Perhaps the finest table fish is the "matrinchá," which is not only salmonlike in appearance but the pinkish flesh tastes like the salmon of the Pacific coast of North America.

In the shallow headwaters of the tributaries there are innumerable small fish, some no doubt the young of the larger species, which the Camayurá collectively call *yanaboró*. They range from a few inches to a foot in length. In these shallow waters is also found the *wiraké*, or electric eel, which preys on these smaller fish. The shocking power of this fish is very real. And not to be forgotten is the *tracayá*, or terrapin, which is plentiful in these waters, the flesh and eggs of which provide the Indians with a considerable supply of food. The flesh of the cayman is not used by the Camayurá.

The material equipment employed in fishing consists of canoes, bows and arrows, dams, weirs, basketry traps, and timbó. Shooting with arrows is by far the commonest method of fishing. As a man never moves far from the village without his bow and arrow, he is always ready to shoot a fish in some nearby stream. Even when timbó is used, shooting is resorted to so as to dispatch the fish. Of course, once the fish have died from the effects of timbó they can be picked up by hand. The weirs used by the Camayurá are cylinders about 4 feet long and 2 feet in diameter made from light cane, the longitudinal

cane rods being held together by withe lacing placed about 6 inches apart. The closed end is conical, and the broad end has an opening 6 inches in diameter, permitting the fish to enter. These weirs are placed at intervals into brushwood dams, with the opening facing upstream. The dams themselves are made of brushwood and are usually pinned down by crossed stakes. In deeper streams the brushwood is held in place by upright stakes and is weighted down by heavy stones. During low water the dams are permanent for several months, a gap being left open to allow the fish to enter when not in use.

Dam fishing is employed with or without timbó. Some morning when the men observe a large number of fish above the dam they run two or three canoes through the gap and close it. The men in the canoes then go upstream and drive the fish down toward the dam, near which a number of men are stationed with bows and arrows to shoot the fish as they try to escape.

When timbó is used, an additional dam is built upstream so that the fish are completely enclosed. Weirs are placed in both dams and after the timbó is mixed with the water the fish can be easily shot as they come to the surface for air. The following day all the fish are dead and can be collected from the surface near the lower dam. This has to be done early before the kites and gulls carry off the fish.

The conical hand trap which is used among the weeds in shallow water is about 2 feet high, 18 inches wide at the bottom, narrowing to about 6 inches at the top. A man will wade along in the shallow water placing the trap down as he goes. When he feels a fish in the trap he puts his hand down through the hole in the top and throws the fish onto the bank. This is a blind way of fishing and only small fish that hide among the weeds are caught in this manner. The hand trap is made from the same materials as the weir and can be employed with or without the use of timbó.

For poisoning fish the Camayurá use several kinds of lianas or vines which the Brazilians collectively call timbó. A Brazilian naturalist of the Museu Nacional of Rio de Janeiro informed me that these vines contain rotenone, which when mixed with water has a paralyzing effect on the breathing organs of fish. In order to release the poison, the bark and stems of the vines have



to be crushed and the sap allowed to mix with the water. To be most effective, timbó should be applied in still water; from 3 to 12 hours is required to kill the fish. The time, of course, varies with the volume of timbó applied. Fish that are temporarily stupefied will revive if allowed to drift into pure water.

The Camayurá also use the fresh-water terrapin and the diamondback marsh turtle for food. Of the two the terrapin is by far the more important. Young men catch terrapin by swimming. They slowly swim near the terrapin while it is on the surface, and as it dives the swimmer follows it under water and captures it. The terrapin can be prepared for food in two ways; by cutting out the fleshy parts and boiling them, or by placing the terrapin, back downward, on live coals and roasting it. During the months of August and September, when the rivers are at their lowest and the sand bars are exposed, the terrapins crawl over the sand and deposit their eggs in holes in the sand. A terrapin may lay as many as 12 eggs in a nest, the eggs being pure white in color, ovoid in shape, and about  $1\frac{1}{2}$  inches in length. The interior is almost entirely taken up by a yellow yolk, which when boiled or roasted is very tasty, although much coarser grained than the yolk of a hen's egg. The eggs are evidently rich in oil and protein, for the Indians gain weight and strength at this time of the year.

During the egg-laying months the Camayurá go out at dawn, and as they paddle near the sand bars they see terrapin trails leading from the water to the nest. They follow these trails, and a great shout goes up when they uncover a nest of eggs laid during the night. Sometimes they are disappointed, for otters, foxes, gulls, and kites also like terrapin eggs and may have preceded them. At this time of the year small groups of Camayurá and Trumai spend several weeks away from the village, living on terrapin eggs and camping along the banks of the rivers. It is during this period, too, that their enemies, the Shukaramái and Juruna are also wandering, and a careful watch has to be maintained by the Camayurá so that they will not be surprised and massacred during the night. The diamondback turtles are less numerous, but when one is found it is taken to the village and kept tied to a house post until the owner wishes to roast it.

In order to give a more intimate picture of a fishing expedition, I shall describe a fishing trip in which I participated—chiefly with a movie camera.

Early one morning while it was still dark, Tamapú, the chief, could be heard walking up and down in the plaza in the village, giving instructions to his people. Asking a member of the Roncador-Xingú Expedition, whose hammock was next to mine and who had some knowledge of Tupí, what it was all about, he informed me that Tamapú was telling the men to make preparations for a fishing expedition. He detailed certain men to go and prepare the dams, others to go and cut timbó, and others to repair their weirs and hand traps. About 8 o'clock in the morning the young men went off to their tasks; all that day we were able to watch the men repairing weirs and putting points to their fishing arrows. Tamapú, himself, made a new conical hand trap in order to show the details of its manufacture.

Late in the afternoon the men who had gone out to cut timbó returned carrying neatly tied bundles over their shoulders. Some of the young men carried two bundles, one for their father or brother, who had remained in the village to repair weirs or had gone to prepare the dams. The bundles were about 18 inches in diameter, strongly tied with sipó vine, and were made up of sticks about a yard in length ranging from  $\frac{1}{4}$  of an inch to 2 inches in diameter. These sticks, of course, were lengths cut from the long timbó vines which hang from the trees in the forest. At sunset the men who had built the dams returned and everything was ready for the next day's fishing trip.

The next morning all the able-bodied men, boys, and little girls set off to the stream where the fishing was to take place, carrying manioc cakes, burning brands with which to start fires, tobacco, hand traps, and bows and arrows. When we arrived at the stream an hour later, some of the young men who had preceded us were just completing the task of placing the weirs in the dams. The area enclosed by the dams was a wide part in a shallow stream about 150 yards in length and 100 yards at its greatest width. As there was a small island in the lower part, two dams had to be built while a single short dam enclosed the upper end. As this was the season

of low water there was very little flow in the stream. The enclosed area was about 12 feet deep in the center, but at the dams the water was no more than 3 or 4 feet in depth. The dams were made entirely of freshly cut brushwood pinned down at intervals of 10 feet by crossed stakes. Four canoes were inside the enclosure.

Tamapú now gave instructions to the timbó beaters. Each man cut two long stakes and waded waist deep into the stream. With a wooden club he drove the stakes into the stream bed so that they formed a cross. The two stakes were then firmly lashed together. Into the crotch formed by the two stakes which was just above the surface of the water, the timbó bundles were placed. Altogether seven of these beating places were made—three on one side of the enclosure and four on the other. The men then cut heavy sticks about 4 feet in length and began beating the bundles.

The beating continued for about 2 hours or until all the bundles had been reduced to shreds. A beater would hammer away at a bundle, then turn it over and continue. Once the bark was loosened and the sticks began to break up he would grasp the bundle in his hands and douse it up and down in the stream so that the sap would mix with the water. After dousing the bundle he would sometimes jump up and down in the water, threshing it with his arms to make the poison spread more rapidly.

While the beaters were thus occupied, the older men, Tamapú among them, went up and down along the shallow weed-filled margins of the stream with their conical basketry hand traps, pushing them down as they waded along. Every now and then one could be seen thrusting his hand down through the opening at the top and throwing a fish onto the shore. Every fish down to 2 inches in length was accepted. Boys and girls along the banks collected the fish for their fathers and brothers.

Toward the end of the timbó beating a great shout went up and the Indians pointed toward the center of the stream, where a number of fish were seen breaking the water. The poisonous juice was beginning to take effect. After this first showing, fish all over the pond could be seen periodically jumping or swimming lazily along the surface evidently gasping for air. It was at this

point that the bowmen got busy in their canoes along the dams and on the shore, shooting at fish that came to the surface.

After the shooting began, Tamapú and the men too old to shoot, sat on the shore giving instructions and advice to the bowmen. There was much shouting, laughter, and banter. Good strikes were applauded and misses were booed in a good-humored way. It was amusing to watch a bowman in the bow of a canoe following the wake of a fish with arrow fixed and bowstring taut, giving directions to the paddler behind him. As the fish were small, the archer had to be no more than 15 feet from the fish before he loosed his arrow. The men and boys on the dams did better. As the fish approached in their effort to escape, the archers would stand like statues with taut bows, and when the fish came within range they were shot sometimes at a depth of 3 feet.

Tamapú kept watching the men in the canoes and was evidently dissatisfied with their performance. Eventually he called out that they were missing too many fish because they had had sexual intercourse the night before and that they had better let the boys do the shooting. This obviously was not meant as a joke, for the men obeyed and were replaced by boys. It was true that the boys did better. Hour by hour more fish came to the surface and lay still. At first they struggled, to escape when someone tried to pick them up by hand, but toward evening many drifted against the lower dam quite stupefied. Just before sunset the fish were gathered, strung on sticks or vines, and, suspended from poles, were carried back to the village. Early the next morning, men returned to collect the dead fish, clear the weirs, and open the dams so that the fish could again move freely in the stream.

The next day we were able to observe how the fish were cured. First the chief saw to it that every house group had its fair share of the several hundred fish caught. Following this the men made platforms about 3 feet high covered with sticks. The women cleaned the fish and placed them on the platforms. Many of the smaller fish were not cleaned but were thrown on the platform in the round. Small fires were then lighted under the fish so that the heat and smoke would cure them slowly. The length of the platform, of course, depended on the size of the catch. The platforms



which are about 1 yard in width may attain 20 feet or more in length. The fish were left on the platforms for 4 or 5 days. However, the people began to eat them during the first day. During the rainy season the fish are sometimes cured in the houses and are wrapped in leaves and stored in large wickerwork baskets. But during the dry season the fish remain on the platforms until eaten. As there were only two small dogs in the village, the problem of protecting the fish was not serious.

## HUNTING

Hunting plays a very minor role in the economy of the Camayurá. Such large game animals as the deer, tapir, and peccary are not hunted for food. They may be killed if they disturb the manioc and sweetpotato fields, but even then their flesh is not eaten. The jaguar and ocelot are hunted for their skins, bones, teeth, and claws. About the only animals that are hunted for their flesh are the monkeys and the paca, and only the old men are permitted to eat their flesh. During the 3 months I was among the Camayurá I heard of no hunting trips nor did I see the people eating flesh food. However, a certain number of monkeys and ocelots must be hunted, as their bones are used for making arrowheads. Jaguar hunters are specialists. They use arrows that are tipped with large bamboo points and paint themselves black as if going on a war party.

Birds, on the other hand, are of greater economic importance. The Camayurá occasionally hunt the various varieties of mutúm, jacobí, and the makúku and pikaú. There appear to be several kinds of forest fowl which the Brazilians call mutúm (Cracidae family). There is a large black variety about the size of a turkey, the male of which has red wattles and a red bony crest. A smaller and more common variety has white wattles and a crest of feathers. The black jacobí, about the size of a hen, is quite plentiful in the forests. The flesh of these mutúm is dark but tasty. They feed on the berries of certain tall forest trees and are difficult to shoot because of their shyness and the range at which they have to be shot. Perhaps the best game bird is the makúku—a gray, white-fleshed partridge about the size of a small hen. The pikaú is a brown bird and looks like a large pigeon. Besides these larger

birds there are numerous varieties of quail. As mutúm hunting requires great skill with the bow, only a few men specialize in it. The Trumai, who eat mutúm, are said to be the best bird hunters in the area. Birds are hunted early in the morning and at sunset and the hunters are just as anxious to get the feathers as the flesh. Although there are ducks in the rivers and lakes, they are not hunted for food by the Camayurá. The feathers of the hawks, the vultures, and the eagles are especially prized for feathering arrows. The feathers of the blue, red, and yellow macaws, the toucan, the parrot, the reongo, and various-colored weaver birds are used for making feather ornaments. Smaller birds which can be approached are shot with the blunted whistling arrows. Whether the Camayurá use traps to capture birds was not ascertained.

In addition to hunting birds for their feathers, the Camayurá keep great numbers of live birds in the village for this purpose. Among the most common are parrots, macaws, and weaver birds. When a man wishes a few feathers he pulls them from the bird's wings, tail, or tail coverts. Besides these feather-producing birds, the Camayurá keep parakeets and other small birds as pets. All these birds are caught young. Boys, particularly, watch for nests and when the birds are a few days old they bring them to the village. Sometimes as many as 70 parakeets are to be seen in a house. The young featherless parrots and parakeets are transported in special baskets woven from green grass and are kept in these baskets near the fire at night. During the day they are kept in shallow pits in the floor of the house to prevent them from running away.

The Camayurá are very kind to their birds. Knowing what food they require they spend much time collecting the grubs and fruits which the birds need. In the mornings it was an amusing sight to watch the girls and boys feeding the young parrots and parakeets. They would chew boiled sweetpotato or *menyú* and feed the young birds directly from their mouths. When the birds become a little larger they eat off the ground and sit around the fire in the morning just like the people. One cold morning I moved a number of young parrots away from the fire fearing they would burn themselves. But the parrots remonstrated with loud chatters and soon lined up in their

original position near the fire. Once the birds get into the habit of being fed they insist upon this service for the rest of their lives. Even a full-grown bird will fly in front of one, chatter to attract attention, and then flap its wings rapidly and open its mouth. While one is eating, they alight on one's shoulders, head, and on the edge of one's plate. To a white man they soon become pests. The parrots and weaver birds, particularly, take delight in carrying off pencils and paper, and even to taking cigarettes from the package in one's shirt pocket. One day a weaver bird was seen flying around the camp with an ampule of expensive penicillin in his bill. On another day the same weaver bird was observed systematically thrusting his bill between the pages of the Yale Outline of Cultural Materials just as if to see whether there was anything of interest inside.

Although the Indians are not particularly interested in hunting by themselves they were always willing to accompany the white men on their trips to the woods to shoot deer and birds for the table of the Expedition. On several nights a jaguar (*yawát*) was heard roaring nearby and a few days later one was shot a few hundred yards from the camp. Small deer are quite plentiful and are so tame that they can be shot easily with the ill-kept Winchester forty-fours in common use in the interior of Brazil. While all game was cooked and eaten by the Expedition, the paca was found to be the most tender, jaguar and tapir being rather tough.

## MANUFACTURE

### THE BOW AND ARROW

A Camayurá and his bow and arrows are inseparable companions. With them he hunts, fishes, and goes to war. At night they are near his hammock, ever ready to be used in repelling a surprise raid. In hand-to-hand combat the bow is used as a thrusting weapon. An old Camayurá showed me a scar in his chest caused by the thrust of a Shukaramai bow. Furthermore, the bow is a mark of authority. When the chief gives his instructions to the people he walks up and down the village plaza with his bow in his hand. When a man is being bled he leans on his bow while a relative scarifies his body. The first toy a boy of 5 or 6 receives is a small bow and arrow. With

this he plays, receiving larger and larger bows as his strength increases until he finally receives the full-size 7-foot bow of the adult man. In puberty seclusion one of the main tasks of a boy is to become a skilled arrowmaker.

The Camayurá are recognized by their neighbors as the expert bow makers of the Upper Xingú area. The typical Camayurá bow is rectangular in cross section, from 6 to 7 feet in length, and is made from the dark wood of the pau d'arco (*Tecoma violacea*). In addition to this type, the Camayurá make a smaller oval-shaped bow of a yellow-colored wood, also pau d'arco (*Tecoma conspicua*). This latter is of inferior quality and is made by the beginner or inexperienced worker. Although the best bows are made by the Camayurá and acquired by the other tribes through trade, there are only four expert bow makers at present among the Camayurá.

The rectangular bow, the Camayurá say, is a gift of Mavutsiné, the creator. After he had created the people, Mavutsiné made many inferior bows from yellow wood, a few good bows from dark wood, and two guns. These he laid on the ground and asked the people to choose. The hunting tribes, who are the enemies of the Camayurá, chose the inferior bow. The Camayurá then chose the good bows. Finally the *caraiba*, white man, chose the guns. Mavutsiné was sad because the Camayurá did not choose the guns. He became angry and ordered the white men to leave. He scattered them in all directions, for they were numerous. The white men are stronger because they chose the guns, but the Camayurá are the favorites of Mavutsiné because he told them to remain at Morená.

Although the origin myth describes the Camayurá as receiving the black, rectangular bow directly from the creator, they add that this bow is a Juruna type and that they originally made the light-colored elliptical bow which is in common use in the Xingú area. As far as is known the Camayurá are the only ones who make the black bow in the Upper Xingú, although it is found among the other tribes, having been acquired through barter.

The wood for making the rectangular bow, *wirapát*, is known as *wiraputá*. For best results the wood should be cut in November and December. It is worked green and is kept in water



during this period. The wood is first shaped with an ax and later with a knife and finally rubbed down and smoothed with a piece of sandstone. The length of the bow varies with the maker, but most of the bows seen ranged between 6 and 7 feet. In the middle these bows are 1 inch in width and three-quarters of an inch in thickness. The wood when new is brick-colored but gradually darkens until an old bow is almost black. Eventually an old bow loses its resilience and is discarded. The light-colored bow, which is elliptical in cross section, is shorter and is made by young men. It is weaker and does not last as long as the rectangular bow. Small bows for boys are also made from this wood.

The bow string is made from imbauba fibers spun into a strong cord about one-eighth of an inch in diameter. Both ends of the bow have a shoulder to hold the bow string in place, the extra cord being brought down to the middle of the bow and wrapped tightly around it.

The Camayurá make excellent arrows, averaging 5.5 feet in length, from uba cane or taquari (bamboo). The typical arrow, *v'ip*, has three principal parts: (1) the shaft, (2) the foreshaft, and (3) the head. In addition to these parts, the maker needs feathers, sipó vine, and cotton twine for lacing, beeswax and rosin to give the lacings firmness and to give the arrow bands of reddish-yellow coloring. In the arrow which the Camayurá prize most highly, the shaft is made of a piece of smooth faultless uba cane 53 inches long and one-half of an inch in diameter. Into one end of this hollow shaft he inserts a foreshaft so that about 6 inches remains inside of the shaft and about 12 inches is left protruding. The foreshaft is made from a branch of some hardwood and is wavy or sometimes almost corkscrewlike in shape. To hold the foreshaft in place and to prevent the cane from splitting, the joint is tightly bound with a narrow brown-colored strip of sipó vine bark. About 4 inches below the joint the cane shaft is given another 6 inches of lacing, both to reinforce the shaft and to give it beauty. Another narrow band of lacing is placed about 8 or 10 inches from the feather end of the shaft as well.

To the foreshaft the Camayurá fix a variety of arrowheads or points made from the stings of a stingray, monkey arm bones, or from the small ribs of the tapir and jaguar. The bones are

whittled down until they are slender splints from 2 to 3 inches in length and slightly bow-shaped. This splint is then laid onto the flattened point of the foreshaft and tightly bound with waxed cotton twine, so that one end of the bone forms the point and the other a single barb. A heated piece of jatobá rosin is then applied just back of the binding and the arrow is turned so that a 2-inch band of yellow or red rosin adheres to the head, strengthening it against the softening effects of water. The Camayurá now like to use 3-inch wire nails or bits of heavy wire, for much less work is required to prepare points from these materials. For war and for hunting the jaguar and the tapir a bamboo point is used. In this case no foreshaft is required. The bamboo point is about 18 inches long with a lancelike point which is fitted into the cane shaft in the same manner as the foreshaft. The broad sharp-edged blade evidently inflicts a greater wound, thus giving increased killing power. The Camayurá also make a whistling arrow which is used for hunting birds and for games. It is the favorite arrow of the boys. A hollow tucum palm nut about 1½ inches in diameter is fitted over the end of the cane shaft, being firmly held in place with beeswax. Two or three narrow slits are cut into the nut so that when it is shot it makes a sharp whistling sound. Sometimes the foreshaft is also put in so that the whistling nut fits into the joint made by the foreshaft and shaft. This arrow kills birds by stunning them.

The Camayurá, like the other Xingú tribes, have a characteristic way of feathering their arrows. The large feathers of the urubú, mutúm, or hawk are split and the two halves are fixed to the shaft at a 45° angle of torsion, the feathers varying from 8 to 10 inches in length. The ends are first bound to the shaft with sipó vine in the anterior part and cotton twine in the posterior part. The feathers are then sewn onto the shaft through small holes made into the cane at five or six different sections, each section having three transverse bindings. The end is decorated with a narrow band of red and yellow toucan feathers. In sewing the feathers onto the shaft the Camayurá use a fish tooth for a needle and "caitetú" (peccary) hair for thread.

It is doubtful whether the Camayurá have a general word for the arrow, each type of arrow

being given a word defined by its use. The *ĩ'ip* is the arrow pointed with tapir bone and used for hunting monkeys and the small animals. The *iripará* is the whistling arrow which usually has three short feathers bound at the ends to the shaft. These feathers are not split, nor are they sewn to the shaft. The *iwapí* is the fishing arrow with bone points, but it has no feathering. The *mocoin-iwapí* or double-pointed arrow is also used for fishing. The arrows used by small boys are slender, sharpened reeds with a feather or two tied to one end. Larger boys use the whistling arrow. Although arrow shafts made from bamboo were seen, they were considered inferior by the Camayurá. In shooting the arrow the Camayurá hold the bow in a vertical position. The arrow is held against the bow with the index finger of the left hand while the end is held to the bowstring with the thumb and index finger of the right hand. The string is pulled back with the index, middle, and ring fingers. In shooting at distant objects the aim is elevated above the target. Up to 100 feet they shoot directly with great accuracy. In the mornings it was a common sight to see boys shooting small birds from the tops of trees about 30 to 50 feet tall with whistling arrows. One advantage of the whistling arrow is that it can be heard, and this may explain why it is used around the village by boys. Even if one is struck with one of these arrows it is not likely to cause a serious wound.

Besides the origin myth of the bow, only one other belief associated with the bow was heard. A man with an infant child was not supposed to make a bow, for if he worked at bow making it would cause the infant to have diarrhea.

#### THE CANOE

The Camayurá, like the other tribes of the Upper Xingú area, use the jatobá bark canoe (*ígat*). It is an indispensable means of transportation, and is used for fishing, hunting, raiding, and visiting. Every family has at least one canoe. There are small fishing canoes used by two or three men and larger canoes which carry as many as eight people. In their travels from one village to another, family groups often spend weeks in their canoes, moving by day and camping on the banks of the rivers at night.

The Camayurá claimed that they know how to

make dugouts and say that they were taught their manufacture and use by the Juruna. Although no dugouts were seen, the Camayurá stated that they use them on the lakes because they are more seaworthy than the shallow bark canoes. When traveling, everyone has his or her position in the canoe. The head of the party sits in the stern, the paddlers sit in the bow, while the women and children are seated in the center. A hearth made from sand is also located in the center, on which the women are able to prepare food. Children, as well as women, use a large calabash as a lavatory when on all-day journeys.

When a man wants to make a canoe he selects a large jatobá tree and asks a few expert wedgemen to help him. February is the best time for making bark canoes for during this month the bark is easy to remove and is not apt to crack. He then builds a scaffolding of poles lashed with heavy vines around the tree so that he can work up and down the trunk. First he cuts a semicircle with an ax above and below and then makes two vertical cuts from top to bottom. Wooden wedges are now inserted into the vertical cuts and men on each side begin to hammer the wedges in with wooden clubs in order to remove the bark evenly from the trunk. Great care is taken in wedging so that the bark will not crack. Once the bark is removed from the trunk it is carefully lowered to the ground. This completes the first day's work. The tree is, of course, left standing with one-half of the lower part of the trunk bare. In time the cut heals over and the tree continues to live and can be skinned again after several years. There appear to be plenty of jatobá trees in the forests, but if a man wishes to reserve a particularly fine tree he needs only to build a scaffolding around it and to inform the other men that he intends to make a canoe at such-and-such a place.

Next day the canoe builder returns to shape the bark trough. The bow is tapered to a point and the stern is thinned down ready for bending. The bow is always the narrower end of the shell. On the third day the man comes back with his assistants to perform the bending. Two heavy stakes are driven into the ground on both sides of the stern. A fire is then made inside the stern end of the trough on a layer of earth. After the heat has made the bark flexible, two strong poles



are placed underneath the stern and the bark is forced upward to form a fantail stern. The two lateral stakes on the sides prevent the bark from bulging outward. The poles are lashed in place and left overnight. Fires are then built along the trough to make it curl inward and cross braces from gunwale to gunwale are placed at intervals to give the shell firmness. The bow is forced up slightly to keep it above the surface of the water when the canoe is in use.

The day following the bending, the canoe is placed upon a saddle made by crossing two pairs of stakes and is left to dry for several days. After it is dry the canoe maker returns and goes over the hull very carefully sealing up any cracks that may have appeared. The canoe is now ready for use and a number of men carry it to the river.

Camayurá paddles are from 4 to 5 feet in length, the blade being straight-sided and pointed at the bottom. The T-shaped handgrip is not a separate piece but is carved out of the handle. Sometimes the blade, instead of being flat, is carved in the form of an angular trough so that only one side is used for propulsion. No decorative designs were seen on paddles. Canoes are also propelled by poles, especially in shallow water. Every canoe has at least two paddles and two poles. When not in use, canoes, paddles, and poles are hidden in the bushes to keep them from being cracked or warped by the sun. Canoes are also turned upside down and left under water to prevent cracking. In addition to the paddles and poles, every canoe is equipped with a gourd bailer, for even if it does not leak water often comes over the low bow.

As has been mentioned, the bark canoe is an important part of Camayurá equipment. The Camayurá state that although a canoe can be easily and quickly made there is always a risk that the bark will split from end to end or that large cracks will appear in the hull. These dangers, they believe, are due to the ill-will of the *mama'é*, or guardian spirit, of the jatobá tree. In order to assure success they must keep the spirit away from the tree while the bark is being removed.

The *mama'é* of the jatobá tree is an insect called *turuwá*. This insect lives in the tree and watches over the welfare of the tree. When the canoe maker is ready to peel the bark off he smokes tobacco near the tree and asks *turuwá* for the

bark. If *turuwá* flies away it is a sign of permission but if he remains in the tree it signifies that he is unwilling to have the bark removed. The canoe maker must continue smoking and talking to *turuwá* until he flies away. Only then can the bark be removed. If the bark should split in the process of peeling the canoe maker will accuse *turuwá* of bad faith and go to another tree and plead with its *mama'é*.

#### TWINE

An important item in Camayurá economy is twine. It is used in making hammocks, bow-strings, arrows, ornaments, in rolling cigarettes, and for many other uses in which tying is necessary. Although sipó vine is widely used for lashings in house making and for the preparation of large carrying baskets, the most important twines are made from cotton and burití fiber.

When a woman wishes to make cotton twine (*nimo'i*) she takes a little basket and goes to some of her tall cotton bushes and picks as many bolls of cotton as she thinks she needs or cares to prepare during the day. She then sits in the shade of the house with her basket of bolls, an extra basket for cotton seeds and her spindle. First she removes the seeds, then she plucks out the cotton until it forms a flat, thin disk about 8 inches in diameter. She continues this process until she has four disks of cotton, one on top of the other, resting on her thigh. The four disks she places over a smooth stick about 18 inches long and one-half inch in diameter. She then strikes one end of the stick against her knee until the cotton clings together around the stick in a long cylinder. The cylinder is removed from the stick and hung over it and waved in the air until it stretches into a fluffy soft cord about 2½ feet long and 2 inches in diameter. The woman then stretches out a length from the end of the cord and fastens it to the top of her spindle. She then sets the spindle in motion by rolling it on her thigh from knee toward her body. As the spindle turns and twists the cotton she keeps jerking the cotton to lengthen it and to keep it tight. After she has spun about a yard, she loosens the twine from the end of the spindle and fastens it just above the whorl and as the spindle is set in motion with her fingers the cotton twine is wound around it. This process is repeated

until she has spun all her cotton. The twine is then removed from the spindle, rolled into a tight ball, and stored in the woman's workbasket.

The Camayurá spindle (*i'im*) is a thin stick about 12 inches long to which a hardwood whorl (*muriti*) 2 inches in diameter is attached 2 inches from the bottom or thick end. The cotton twine is about the thickness of ordinary store string and also about as strong. Although all women spin, it is particularly the task of girls and old women. Late in the afternoons after the girls have painted themselves with urucú they sit in the shade at their spinning, often surrounded by young men similarly painted who engage them in conversation.

Burití twine (*muritcopawán*) is made from fibers obtained from the shoot or rod which forms the new growth of the burití palm. This rod contains the unformed leaves. The yellow leafy material is removed from the outer green covering by hand. The long leafy strips are then boiled to remove the starchy materials and rubbed by hand until only fine pale yellow fibers remain. These are tied in hanks and left to dry. In making twine, usually three strands of fibers are used although fine twine with two strands was also seen. The strands (*boritseawit*) are rolled on the thigh, each strand being rolled separately on the inward stroke but allowed to roll together on the downward stroke. The three-strand twine is the basis from which heavier twines, cords, and even light ropes are made. Burití twine is rolled into balls and kept until needed. Like spinning, this is always the task of women.

#### HAMMOCK WEAVING

The Camayurá have two types of hammocks—a solid cotton hammock and an open network hammock made from burití and cotton twine. The open network hammocks are the most common and are made by the Camayurá. Hammocks (*ení*) are finger-woven on a very simple loom (*inimoenóp*). Two posts are driven into the ground, either inside or outside of the house, around which the burití warp twine is passed. The posts are from 8 to 10 feet apart and about 3 feet high. The warp twine is the common three-strand size. The woof of cotton twine is woven across the warp at intervals of from 2 to 3 inches, leaving the warp threads about 2 inches apart.

The cotton woof strings are three in number. The woman begins from the top working downward. She places the burití twine on one of the cotton strings and pulls it up between the other two strings which lie on top of the burití twine, and braids. This process is continued until she completes the cross woof. The material is then cut and the warp strands at each end are tied to form a loop to which burití fiber rope is attached for slinging the hammock. At first the hammocks are tan in color, but they soon become brown from the urucú which the people smear on their bodies. The weaving of solid cotton hammocks was not observed, and it may be that they are obtained from the Arawak-speaking Waurá or are made by Waurá women married into the tribe.

#### SEATS

The Camayurá make two types of seats, one for men and another for women. The man's seat or stool (*apiká*) is carved from a solid piece of wood, usually in the form of a bird or turtle. The stool, which is about a foot high, rests on two plank-like feet.

Instead of sitting on the ground while at work the women often use a seat made by tying together round smooth pieces of burití leafstalks about 2 inches in diameter and 18 inches in length. A hole is bored through each end of a stick and a strong cord is passed through all the sticks and knotted at each end. The seat can be rolled up and easily carried from place to place. Seats are used while the people work; when not at work, the Camayurá generally sit or lie in their hammocks.

#### MORTAR AND PESTLE

Another important article made from wood is the mortar (*inu'd*). The Camayurá mortar is made from a block of heavy hardwood roughly 2 feet in length and 18 inches in diameter. Instead of standing upright, as does the mortar used by the Brazilians, the Camayurá mortar lays in a horizontal position, the cavity being made in the upper side of the block. The pestle (*imirá*) is a heavy stick about 3 feet long and 3 inches in diameter, slightly narrowed in the middle. The mortar, although used principally for grinding dried manioc balls, is also used for grinding dried maize.



## GOURD VESSELS

Gourd ladles which hold little more than a large tablespoon to those with a capacity of a quart serve a wide variety of purposes. They are used as spoons, cups, bailers, dishes, bedpans, containers for piqui oil, urucú, and beads, and ladles for stirring and pouring manioc juice. These vessels are made by cutting in two equal parts a pear-shaped gourd with an elongated protuberance which serves as a handle. Although most of the gourd vessels are ladle-shaped, a few waterpots were seen; these were made by cutting off the protuberance, leaving a narrow opening at the top. In cutting a dried gourd, a knife or other sharp object is used, the maker going repeatedly over the line of cleavage, later smoothing and rounding the edge with a piece of sandstone. Gourd vessels of the pot form are also used as containers for twine and tools used for making arrows and the *ulurí* for women; gourds of this type are usually suspended in a net from a rafter. For this purpose the Camayurá are now anxious to get tin cans or boxes with lids.

## THE SIEVE

We have had occasion to discuss the sieve (*tuaví*) in connection with the preparation of manioc. It has, at least, one other important use, namely that of storing feathers. The long tail and wing feathers of the *mutúm*, eagle, and *urubú* that are used for feathering arrows are valuable and difficult to get. To prevent them from being bent, torn, and blown away, the owner places them lengthwise in a fold of the sieve and holds the sieve together by fastening together two pairs of sticks at each end of the sieve. Feathers for making ornaments are similarly stored.

The *tuaví* is made of burití fiber and cotton twine very much in the manner of a hammock. The burití fiber in this case, however, is obtained from the central spine of the leaf, long, heavy slivers being peeled off. Each sliver or rod is about 16 to 18 inches in length and about one-sixteenth inch in diameter, being uniform in thickness, straight, and springlike. These rods are then woven together with cotton twine in the same manner as the warp of the hammock, the interstices being about one-eighth inch apart. In appearance it looks like a small mat.

## BASKETRY

In contrast to the Carib-speaking Calapalo and Cuicúru, basketry is not in great evidence among the Camayurá. Men are the basket makers and appear to specialize in the making of fish traps and weirs, which have already been described. The most common kind of basket, the *iripari*, is a simple plaited basket which is made in many sizes. The small ones are square and the large ones oblong. The large ones are usually 3 feet long, 2 feet wide, and 6 to 8 inches high, and are used for carrying small manioc tubers, sweet-potatoes, and piqui fruit. The smaller ones, which the women use for picking cotton and as spinning and weaving workbaskets, are 8 to 12 inches square and about 4 inches in height. These baskets are made from narrow strips obtained from the cortex of the burití palm leaf stalk. They are usually a solid brown in color but sometimes black strips are introduced, giving rectangular and triangular patterns.

The Camayurá also make a burden basket which can scarcely be called a basket from a technical point of view. This container, known as the *pirapuitán*, is about 3 feet in length, 18 inches in width, and 16 inches in depth. The frame is made with four oval hoops of wood, one for the back, two for the sides, and one for the bottom. These hoops are firmly laced together with sipó vine lacing and the spaces within the hoops are filled with large irregular meshes made with the same vine lacing. This container is used for transporting and storing dried fish, dried manioc tubers, and *menyú*. When loading a *pirapuitán*, leaves are first laid within the framework, the foodstuffs are then carefully stacked within and covered with more leaves. The open side and top are then laced over to keep the contents from falling out. This burden basket is carried on the back with shoulder straps and a tump line.

When carrying baskets or bundles on their heads the Camayurá use a small round pad made of grass called *abutéro*.

## POTTERY

As far as could be determined, the Camayurá do not make pots but obtain them through barter from the Waurá. One woman was observed making a small pot, but she turned out to be a Waurá

woman married to a Camayurá. Perhaps the Camayurá once made pottery like the other Tupí-speaking tribes and perhaps still have this knowledge, but all pottery in the Upper Xingú area now appears to be of Waurá manufacture. As the Waurá village was not visited, no special information was obtained about the manufacture of pottery.

The pottery observed among the Camayurá can be divided into two classes—the low flat-bottomed pots with bell-shaped sides and rim and the small zoomorphic pots used as dishes. No jugs, jars, or pitchers were seen. When one observes the Camayurá using their large pots for the processing of manioc, one cannot avoid the conclusion that the size and form of the pots are functionally related to the method of their use.

For processing of manioc and piqui and boiling the mixture of pulp and water, large shallow cauldrons with flat bottoms are ideal. For grating manioc, a wooden or bark vessel no doubt could be used, and a bark vessel for this purpose was observed among the Bacairí. But for boiling the pulp a pottery vessel is needed. The Camayurá use the same type of pot for all the various stages in the processing of manioc, as has been observed, usually reserving the largest for boiling juice.

These pots (*niahé*) range from 6 inches to 3 feet in diameter, and from 4 inches to 1 foot in height, the thickness ranging from  $\frac{1}{4}$  to 1 inch, the everted rim being unusually heavy. The inside is black and the outside colored red, probably with hematite, sometimes decorated with vertical straight lines or zig-zag or wavy horizontal lines in black. The smaller pots are not usually decorated. The smaller pots of this kind are used for boiling fish, meat, or urucú seeds. The medium-size pots, besides for other purposes, are used for carrying water, a large gourd dipper being turned down in the water to keep it from spilling out as the pot is carried on the head of the bearer. The largest pots, as has been explained, are used for processing manioc and piqui. In using the pots over a fire, three stones or three small cracked pots are used as a rest.

The zoomorphic pots (*mawikaipi*) are made in a wide variety of sizes and forms, in red and black, ranging from 2 to 8 inches in diameter. They may be round, oval, or square and are generally quite

shallow, the bottoms being flat or slightly rounded. Protruding from the rims of these vessels are the heads, tails, and feet representing birds, frogs, turtles, and alligators. The larger sizes are used for serving food and the smaller ones for mixing urucú powder with piqui oil. The smallest vessels appear to be used as toys by children.

Another important form of pottery is the flat plate (*niahé*) used for baking *menyú*. These disks with slightly raised rims range from 10 to 18 inches in diameter, 12 inches being the commonest size. These, too, are made by Waurá women, but the bottoms of worn-out old pots are often used for this purpose. Like the large pots, they rest on a tripod of three stones or small cracked pots.

#### COMBS

The Camayurá make combs with bamboo teeth, laced together with cotton twine. The teeth, usually 40 in number, are 4 inches in length, square at the upper end, tapering to flat sharpened teeth of the same size and shape of an ordinary large comb. As the teeth are thicker at the back, the comb is also broader at the back than on the edge. The teeth are woven together with fine cotton twine, the weave sometimes forming a solid band or, as is more common, forming separate triangular patterns. To hold the teeth firmly in line two strips of bamboo 4 inches long and one-half inch in width are laced together across the top, one on each side, and two more below the woven band, leaving approximately three-fourths inch of teeth projecting, the whole forming a firm durable comb. Here again, the Waurá women appear to be the better workers, for their combs are stronger and more effectively decorated.

#### THE ULURÍ (TAMEAHÓP)

The ulurí, which mature women wear over the pubis, is made from the inner layer of the bark of a tree. While the thin parchmentslike bark is still moist and pliable, a woman will cut out a piece 2 inches square. At the bottom she will leave a square appendage. This piece she will squeeze together lengthwise and make a hole through it to which she attaches the cord which passes between her legs. She now folds the bark to form a rough triangle  $1\frac{3}{4}$  inches long and three-fourths of an inch in width, leaving a length of



cord within the fold. She then ties the folded bast firmly with twine and allows it to dry. When dry, the twine is removed and the bast holds its form. To each end of the string which passes through the ulurí, the woman attaches the belt, which is made up of a coil of 10 fine two-ply strings of burití. The string which passes between the legs is made from fine strands of burití fiber, but instead of being rolled the strands run parallel and are held together by using one or the other of the strands to make a knot around the string at  $\frac{1}{8}$ -inch intervals. The strands are thinned out as the woman proceeds from the ulurí, the cord being heavy at the attached end and tapering to a fine point at the loose end.

The men claim that misfortune will follow if they come in contact with an ulurí. An amusing incident will illustrate this attitude. One day I was busy talking to a number of Camayurá women and wished to know something about the manufacture of the ulurí. As it happened, there were some half dozen, which had been made to order, lying on a table some feet away. I asked one of the young men standing near to hand me an ulurí. The man first appeared not to have heard but when the request was repeated the man after a moment of indecision, took a stick and a piece of paper and sweeping the ulurí onto the paper handed it to me at arm's length, to the great amusement of the women.

#### THE SCRAPER

The scraper or scratcher (*yayáp*) which the Camayurá use for scarifying, is a triangular piece of gourd about 4 inches in length and 3 inches across the side into which the teeth are embedded. A row of small holes are drilled with a fish tooth one-fourth of an inch back of the edge and small teeth from the "cachorro" fish are tightly driven through the holes so that they project about one-eighth of an inch on the convex side of the scraper. The teeth are one-eighth of an inch apart and cut a strip about  $2\frac{1}{2}$  inches wide when drawn over the skin.

#### THE TECHNOLOGY OF THE CAMAYURÁ

After one remains among the Camayurá for a while and observes them at work and analyzes the techniques of production, one grows to appre-

ciate the skill and precision of their workmanship and the quality of their products. The technology of these people is simple—simple in the sense that it consists of a limited number of artifacts, tools, raw materials, and sources of power, and the absence of a technical division of labor. Yet when one carefully examines a single artifact, such as a house, an arrow, or a piece of feather work, and judges it in terms of the total technological resources and the demands its production places upon the individual, it is anything but simple.

The manual dexterity of the individual worker is even more impressive than the complexity of the object. For many hours I watched a man at work making an arrow. Surrounded by lengths of cane, sticks for foreshafts, pieces of bone, rosin, feathers, twine, and coils of sipó vine, the man will carefully select the materials that are to be used for a special arrow in order that each piece matches the slight variations in size and length of the stem. Then with no other tools than a shell knife, a fish-tooth drill, sandstone, and leaf polishers he will go to work fitting the parts together, his display of craftsmanship being particularly striking in the sewing of the feathers to the shaft, the completed arrow being, not only an efficient implement, but a work of art.

All this, one might say, is a value judgment requiring comparative evidence for support. In comparing the bow and arrow of the Camayurá with the heavy crude bow and rough bone-tipped arrow of the Guató or the symmetry and excellent straw thatching of the Camayurá house with the palm-thatched shed of the Guató, one cannot avoid giving the award of excellence to the Camayurá. The contrast between the workmanship of the Camayurá with that of such highly acculturated tribes as the Terena and Caduveo is even more striking. These people have adopted the material equipment and techniques of the white man, but this equipment is of the poorest quality and is used carelessly and with little or no consideration for proper maintenance and care. Poverty may explain why acculturated tribes have low-grade equipment but it does not explain inefficient use and neglect.

The Camayurá, too, have material equipment like hoes, axes, knives, and a few rifles, which they have adopted. But it was noted with some

surprise that the old Winchester rifles possessed by the Camayurá were clean and polished and in much better condition than the dirty, rusty rifles of the Caduveo. The culture of the Camayurá is still intact, their technology is of the traditional pattern. What they have that is foreign has been selected for a special purpose and does not interfere with the technology as a whole. The Camayurá are not hunters; the rifles are used for one purpose only, namely, warfare. They were war trophies in the first place and are highly valued as such. It appears that as warfare is an important activity the weapons of war are given great value and special care.

### THE PREPARATION OF FOOD

In addition to the food products, utensils, and other implements required for preparing food for consumption, which have already been described, there is fire (*tatá*). To make fire the Camayurá place the point of a length of cane used for arrows in a notch made in a piece of soft dry wood and rotate it rapidly between the palms. When the wood begins to smolder the firemaker blows on the ember, adding dry buriť fiber until a flame appears. This act seldom has to be performed, as fires are kept going night and day. New fires are made by taking burning brands to wherever a fire is wanted. In the mornings when the people go to bathe in the river the boys take burning brands, usually holding two burning sticks together, and run to keep the brands burning. When they get to the river they light a fire to dry themselves after the bath.

The Camayurá say that they did not always have fire. In the beginning the people had no fire and dried their fish in the sun. Then Mavut-siné, the creator, told them to go and find fire. The people said, "We do not know where the fire is." Mavut-siné told them that fire was kept by *awará*, the wolf. When the Camayurá came to the place where *awará* lived they found him taking fish out of his trap. The Camayurá took a piece of buriť palm, lighted it, and ran away. The wood, however, was damp and the fire went out. They returned and stood around watching the wolf throw fish onto the bank. As the fish were flopping around one of them jumped into the fire and scattered burning brands in all directions and

before the wolf was aware of it the Camayurá stole one of the brands and ran back to their village.

The Camayurá then go on to relate that they had difficulty taking fire from one place to another. The moon (*yai*) eventually had pity on them and taught them how to make fire with the arrow. Fire has a *mama'é* called *tataturiáp* which can be seen in the swamps at night. By the description which the Camayurá give, this *mama'é* appears to be phosphorus. When *tataturiáp* is angry he burns houses and makes burns on people at night.

In discussing the processing of manioc we had occasion to describe the four basic manioc products from which foods can be prepared. These, as we have seen, were (1) *tiburati*, the dried balls of grated meal, (2) *temiu*, the dried tubers, (3) *tibuák*, starch flour, and (4) *mohét*, the juice which contained the starch. It is from these four products, with the addition of sweetpotatoes, corn, and fish, that the Camayurá woman prepares a number of foods.

The bread of the Camayurá, as we have said, is *menyú*, or the flat manioc cake. In preparing to make *menyú*, a woman takes a number of dried balls of *tiburati* and grinds them with a heavy wooden pestle. She then sits beside the mortar with a *tuavi*, sifter, across her legs, with another sifter below it on the ground. She takes several handfuls of ground meal from the mortar and places them on the sifter and begins to work the meal back and forth in order that the finer particles will fall onto the sifter below, leaving only the heavier woody fibers which she throws away.

When she has prepared enough coarse flour she sprinkles a little cold water over it and works the moisture in. The resulting mixture is not dough but a moist, crumbly mass. While she has been thus occupied, the baking plate (*yapehé*) has been heating over a fire nearby. When the plate is hot enough she places two or three handfuls of flour on the plate and spreads it with a circular motion of the hand, working out from the center of the plate until the flour is evenly spread over the plate. She watches the baking cake carefully, periodically lifting one side and then another with the *menyú* turner (*iwép*). When the underside turns yellow, she turns the cake over with the turner and leaves it for several minutes but not long enough to turn yellow. The



resulting circular cake is about one-eighth of an inch in thickness and 10 inches in diameter, baked yellow on one side but left white on the other. This she places on another *tuavi*. Sometimes the cakes are left flat but more often are folded over once.

Instead of using the dried balls, a woman can prepare flour from the dried tubers (*temiú*). The tubers are ground and sifted in the same manner, the resulting coarse flour being of the same consistency.

A much finer *menyú* is made by mixing starch flour (*tibuák*) with *tiburati*. As starch flour is scarce, this kind of *menyú* is baked only for visitors and during important ceremonial occasions. The two kinds of *menyú* can be distinguished not only by texture but by taste. The coarse *menyú* always tastes sour because the balls, when drying, turn sour. The starch flour, however, is not sour, and *menyú* made predominantly from this flour has a sweet pleasant flavor. *Menyú* tastes much better when it is hot and is usually eaten freshly baked; broiled or boiled fish can be placed in the fold to form a sandwich. When working in their fields the Camayurá drink gruel made by putting pieces of *menyú* in a calabash filled with water.

By boiling *mohét* long enough, the poisonous acid is removed. The liquid can then be drunk or can be boiled down still further until it forms a thick starch pudding called *kawi*. This is the evening food and is fed especially to young children. Fish, sweetpotatoes, or ground corn can be added to form *kawi* of different kinds.

Sweetpotatoes are baked in hot ashes and appear to be eaten at all hours of the day. When there is a large supply of sweetpotatoes and it is feared they will turn bad they are made into flour the same way as manioc. This flour is mixed with manioc flour and baked to form a special flat sweet cake called *yetiki*.

Fresh ears of maize are roasted before a fire. Dried kernels are ground to form a coarse meal and boiled to make a thick porridge. Cornmeal is also mixed with manioc flour and baked into a flat cake called *kawatsiyi*.

Piqui fruit, after being processed, is eaten by itself. Mangaba fruit is eaten fresh. As the fruit falls off when it is ripe, people can be seen each morning collecting and eating it near the village. Bocaiuva palm nuts can be peeled and eaten raw

or can be roasted before eating. The soft pulp around the hard kernel is a nutritious food. Brazilian cattlemen sometimes boil these nuts in milk and it is said that a man is able to work hard all day on this diet. The small coco babão nut with its highly flavored pulp is eaten raw, as are numerous other nuts and fruits whose names were not determined.

Compared with the preparation of manioc and other plant foods, the cooking of fish and meat is very simple. The smoking and drying of large quantities of fish on long platforms has already been mentioned. These fish can be eaten off the platform or can be stored for later consumption. For broiling small fish from 6 to 12 inches in length, the Camayurá make a tripod about 18 inches in height held together by three cross pieces on which a layer of smaller sticks are laid. The fish are cleaned and placed on the sticks, and a small fire is kept going under them until they are done. If the fish are a little larger, four sticks instead of three are used. Fish are generally cleaned but are not scaled. But the Camayurá have no aversion to broiling uncleaned fish. If the people are very hungry a large fish will be thrown on red hot coals and even before it is done a woman will begin pulling pieces from the tail, putting them on pieces of *menyú*, and handing them to her children. Fish are also boiled in clay pots in which case they are first cleaned. The task of cleaning and preparing fish is the work of women, but the men make the platforms and tripods used for cooking.

Terrapins, which form an important part of the diet, are cut out of the shell and boiled, or are placed on their back, still alive, in a fire and roasted. Sometimes boiled terrapin meat is mixed with *kawi*. Even more important are terrapin eggs, large quantities of which are boiled or roasted in hot ashes. When boiled the white around the yolk is thrown away and the rich yolk only is eaten. When roasted, the shell cracks and the white dries up and the yolk takes on a strong, smoky, but not unpleasant taste. Terrapin eggs, like fish and meat, are eaten with the ever-present *menyú*. Diamondback turtles are prepared in the same way as the terrapins, the eggs, if found, being also eaten.

Meat, as we have seen, forms a negligible part of the diet. Monkeys, when shot, are skinned, cut up,

boiled, and eaten only by the old men. Birds are skinned, cut up, and boiled or broiled on a tripod platform.

The Camayurá make no alcoholic beverage, drinking only water or water mixed with *menyú*. Wild honey, when found, is eaten directly from the comb.

### ORGANIZATION OF LABOR

As has become clear in the preceding discussion of the processes of production, the major division of labor is on the basis of sex. Men are the real cultivators of the soil, for they perform the clearing and the planting of the fields. Men do the fishing and the hunting. Of the manufactures they make the canoes and bows and arrows, weave the baskets, carve the seats and gourd vessels, and build the houses. Women, on the other hand, do the spinning and weaving, make their *ulurís*, make the pottery, process the food products, prepare the food for consumption, fetch water, and take care of the children. Women alone plant and pick cotton. Both sexes participate in the harvesting of manioc, sweetpotatoes, and maize, and in picking *piqui*, collecting firewood, paddling while traveling in canoes, in processing fish, and in making necklaces from beads or shell disks.

There is no clearly defined division of labor by age. Young people undertake adult activities as soon as they are able. In one family in which the mother had died, a girl of 10 processed manioc and did the cooking for her father and two smaller children. As has been said, boys follow the older men when they go fishing and hunting. Men and women continue to work as long as they are able. As they grow old they perform the more sedentary activities, such as wood carving, the making of arrows, and the preparation of ornaments.

Certain activities, like house building, planting, and fishing with *timbó*, are carried on collectively, all the men of the village participating in the task. When collective labor is undertaken it is under the supervision of the chief, although some other man may actually oversee the work, as in house building where the owner is the organizer. In collective enterprises the chief informs the whole village either the night before or at dawn of the day during which the work is to take place. He not only outlines what is to be done but gives

detailed instructions as to who is going to perform the various phases of the work. For instance, in collective land clearing and planting, the chief appoints the axmen, hoemen, and the stalk cutters of manioc. No one, the Camayurá claim, refuses to obey the chief. The chief himself works with the other men and there are no tasks from which he is exempted. This is also true of the chief's wife or wives.

As has already been mentioned, bow making is specialized, there being at present four Camayurá who are experts in this task and who make all the dark rectangular bows which the Camayurá possess. Certain men are also experts at making canoes and ornaments and others are expert bird hunters. Shamans, of course, are specialists, their vocation depending upon a vision which they must experience in order to practice curing or other shamanistic activities.

There is no true division of labor in the same sense that two or more exclusive specialists are required to produce a given article. In collective enterprises, like house building, canoe making, and fishing with *timbó*, there are separate tasks, but these tasks can be performed by anyone, the personnel being interchangeable. In making a bow the specialists perform every task, from cutting and curing the woods to shaping the bow and preparing the bowstring.

### OWNERSHIP AND INHERITANCE

The Camayurá have no large accumulations of property. Houses, tools, weapons, ceremonial articles, and ornaments are sufficient for current needs and for the requirements of exchange. Climatic conditions, the nature of the resources, and the methods of production do not demand the regularized storage of food products. Excesses of foods occur either by chance, as in fishing, or during an exceptionally good *piqui* harvest. As has been stated, manioc is kept in the ground until required. Crop failures or sickness among men, of course, create times of shortage and even distress.

Every married man owns his hammock, bows and arrows, dishes, a *tuaví* for keeping feathers, and various small gourd and basket containers for his tools and paint. When he goes on a trip he folds his hammock into a small bundle and hangs it on one end of his bow, while on the other end



he suspends his small gourds or baskets. He also possesses a canoe equipped with paddles and poles. These articles he has made himself or has acquired through barter; they are his personal property. His unmarried sons or sons-in-law are permitted to use his bow and his canoe. At his death he rests in his hammock and his personal belongings are broken and left over his grave. His wife, similarly, owns her own personal objects like combs, the ulurí, ornaments, dishes, hammock, and tools.

The house, large canoes, guns obtained in raids, large pots, and important ceremonial objects, like masks, skirts, and flutes, are property of the house group. The house chief is the trustee of these objects, but they can be used by the members of the house group with his consent. These are not normally destroyed at the death of the house chief but come under the trusteeship of the new house chief.

The ceremonial or *jakui* house, the sacred flutes (*jakui*), and the sacred posts with the manioc *mama'é* carved on them are the property of the village. At present the *jakui* house in the Camayurá village of Tuatuari is not completed and these ceremonial objects are kept in the house of Turutsí.

We might say, therefore, that there are three kinds of property among the Camayurá: (1) village or tribal property consisting of the ceremonial house and the important ceremonial objects, (2) house group property consisting of the house and the larger objects used by the members in common, and (3) individual property made and used by individuals. There is some indication that songs and dances also are owned and inherited, but no adequate information on this subject could be obtained.

## TRADE

Individual and tribal specialization among the Indians of the Upper Xingú has led to extensive trading and the incipient forms of markets. Although information on this important aspect of economic life is scanty, enough is known to outline the principal methods of exchange and the forces underlying it. Among the Camayurá there are men and women who are experts in the production of certain articles, such as bows, arrows, ham-

mocks, and ornaments. These articles are bartered between the individual craftsmen. New articles such as knives, axes, shirts, and trinkets brought in by the Roncador-Xingú Expedition and the members of the writer's group immediately resulted in a wide circle of exchanges. A shirt given to a man one day would be on someone else's back the following day. Individuals within a village are, therefore, constantly exchanging personal belongings with one another. This kind of exchange the Camayurá do not, however, call trade (*moitará*). These individual exchanges are more in the nature of gifts and take place between fathers and sons, brothers, and most of all between friends. Hagglng over values does not take place; a person gives the other party a gift and makes round-about indications concerning the article he would like in return.

In trade (*moitará*) the individuals between whom exchanges take place are not determined before hand. *Moitará* can take place between the people of one village or between the people of two or more villages. Intravillage trade is usually organized by a house group that has accumulated a surplus of commodities, pots, bows, ornaments, and even food. Some of these objects, such as large pots, may belong to the house group as a whole, others may consist of individually owned objects. The night before the *moitará* takes place the organizer will announce it in the plaza of the village. In the morning the articles to be exchanged will be set out either in the house or before it. The villagers then pass by, look over the goods, and decide what they want. They return to their houses and bring what they wish to give in return, and trading begins. If a man wants a pot, for instance, he will place his objects near it. If the owner of the pot wants them he will take them, after which the other party takes the pot away. If several people want the pot several piles of commodities will be placed before it, the owner of the pot having his choice. If he does not want the objects or there is not enough to satisfy him, he will eventually take his pot away to be traded on some other occasion. Although the organizer is the original offerer or seller, anyone in the village can bring objects which he wishes to exchange and place them in the seller's line. This may go on for several days until interest in trading ceases. Generally there is not

much talking, exchange values being determined by the respective desires of the traders.

Intervillage trade is much more important because it arises from a tribal division of labor or specialization. The Camayurá are the expert bow makers, the Waurá are practically the only tribe which makes pottery, the Mehinácu make the best flutes, the Trumai are considered the best arrow makers, and the Nahukwá, Cuicúru, and the Calapálo are the expert necklace makers. The Camayurá say this division of skills was determined by Mavutsiné, for he gave the original people these articles and taught them how to make them.

The Tupí-speaking Auetí today hold a peculiar position in the trade circle of the Upper Xingú. They have become expert traders, for they not only obtain articles from the other tribes, but knives, axes, hoes, and glass beads from the Indian Service Post to the south which they trade for food, necklaces, bows, baskets, and other goods. Among the personnel of the Roncador-Xingú Expedition the Auetí are also known as the greatest thieves of the area. The Auetí also treat the white visitors differently. One day two Auetí families arrived in camp. The first thing they did was present each white man with several cakes of *menyú*, a hat full of roasted turtle eggs, and, in two cases, with tame weaver birds. They then waited for return gifts. In a day or two they received blocks of "rapadura," wire nails, and a few small knives. With these gifts they were dissatisfied, for on leaving they stole several sheath knives from the white men and some food from the Camayurá.

Intertribal trade is organized by a house chief, if the household requires large pots or ceremonial ornaments. Sometimes a whole village may be organized for such a trading expedition under the guidance of the chief. When a group of traders arrive they are led to the common house in the center of the village and after greetings and food they begin their trading. These trading expeditions take place during the rainy season when the country is flooded and the canoes can cross the flood plain, thus shortening the distance between villages.

Mutual aid between tribes appears also to enter into the trade pattern. The Camayurá relate that the Trumai were once near starvation and came to the Camayurá village for help. They

needed food badly but had little or nothing to offer in return. The chief of the Trumai laid a pinch of piqui pulp before the Camayurá, the Camayurá responded by supplying the Trumai with food which enabled the men once again to undertake their economic activities. Although the Camayurá connect this event with trade, it might very well be related to religion and ceremonialism also, for some of the ceremonials begin with a bit of piqui pulp being laid aside as an offering, denoting supplication of the *mama'é* spirits.

The exchange value of objects is governed by a number of factors ranging from culturally determined attitudes, scarcity, amount of labor required in production, to individual desires at the time of exchange. The Camayurá readily admit that necklaces made from elongated snail shell disks are the most highly prized objects in the Xingú, followed in value by the round disk necklaces, rectangular bows, canoes, hammocks, pots, arrows, and food products.

The high value placed upon snail shell necklaces reflects not only their decorative value but also the time and skill needed in their manufacture and the scarcity of snail shells of proper size and quality. A Camayurá in normal circumstances will give two bows for a necklace of good quality. Canoes, on the other hand, although of great utility, are cheap, no doubt due to the plentiful supply of jatobá trees and the speed and ease with which they can be made. In exactly what quantities objects will be exchanged will, in the final analysis, also depend upon the individual wealth and desire of the two individuals involved in barter. While culturally determined values and economic considerations of scarcity and labor underlay exchange values, individual desires bring about variations from these norms.

What can happen to trade when these generally accepted cultural values are absent is shown by the rather absurd situations created when the white men tried to trade with the Camayurá. An Indian offered the writer a carved wooden stool for which he asked his tent in return; on another day, a woman wanted to trade a comb for a woolen blanket. For some trifling service an Indian would ask for an ax. On the other hand, a woman offered a necklace for a bright tin can with a lid which the writer was ready to throw away. In other words, exchanges were governed by indi-



vidual fancies, neither party fully understanding the other's scale of values.

Money, of course, has not entered the Upper Xingú. One of the most interesting discussions the writer heard took place at an evening session around the village campfire during which a member of the Roncador-Xingú Expedition tried to explain money and its uses to the Camayurá in his halting Tupí. Some coins were passed around and the speaker explained that for various pieces of clothing, food, houses, services, etc., varying piles of money had to be paid. The Camayurá listened with great attention. One Indian eventually asked, "Who makes the money?" This question was not satisfactorily explained to the Indians.

Of the tribal groups seen, the Waurá appeared to be the most wealthy. The people were well fed and the numerous children appeared healthier and more energetic. The fact that the Waurá are the pot makers for the whole region may account in part for this wealth and well-being, for there is a lively trade in pots which break easily and must be replaced.

### SOCIAL ORGANIZATION

Just as the technology of the Camayurá specifies the resources to be exploited and the tools and processes to be used in the task of making a living, so the social organization or social structure defines the relationships between individuals in the manifold activities which constitutes their social life. The rules and regulations that govern cooperation in the activities of production, the division of labor, exchange, ownership, inheritance, and intertribal trade have already been discussed as part of Camayurá economics. But there are numerous other activities concerned, for instance, with procreation, protection, and security, in which the relationship between individuals needs to be defined. As these relationships grow out of blood ties and are expressed in kinship terms, our study of social structure must begin with a discussion of the kinship terms and their behavioral implications.

### KINSHIP TERMINOLOGY

The kinship terminology of the Camayurá is of the bifurcate merging type. (See chart 1.) In

the grandparents' generation there are terms for grandfather, *tamuí*, and grandmother, *utu*, which are used to designate both paternal and maternal grandparents and their siblings.

In the parental generation the term *hapá*, father, is extended to father's brothers although specifically a father's brother is called *pat*, little father. The term *amá*, mother, is extended to mother's sisters although the derivative term *aikamá* is also used. The more general terms *yerúp*, fathers or elders, and *hieĩ*, mothers, are applied to all old people and to ancestors. The term *apí* is applied to mother's brother and any man he calls brother, and the term *yaiÉ* is applied to father's sister and any woman she calls sister. All these terms are used by both men and women.

In his own generation a man distinguishes his older brother, *awaí*, from his younger brother, *irawí*, and extends these terms to his father's brother's and mother's sister's sons. To designate sisters he has only one term, *iran'í*, which he extends to his father's brother's and mother's sister's daughters. For cross cousins, both male and female, there is only one term, *yatuháp*. The terms employed by a woman in designating her relatives in her own generation are somewhat different from those used by a man. A woman calls her older brother *awaí*, her younger brother *yekewí* or *pidá*; her older sister, *pipí*, and her younger sister, *yekepetí*. These terms she extends to her father's brother's and mother's sister's children. Like a man she has only one term for cross cousins, *yatuháp*.

In the children's generation a man calls his son *irai'* (same stem as male sperm) and his daughter *iraiÉ* and extends these terms to the children of all men whom he calls brother. His sister's children he calls *niwá* (nephew) and *niwai'* (niece) and extends these terms to the children of all women whom he calls sister. If a man or anyone he calls brother marries a cross cousin the children will be sons and daughters or if a sister marries a cross cousin the children will be called nephew and niece. But if a cross cousin marries someone from another tribe, then the children of a cross cousin are called *timá*, male, and *katsivá*, female.

A woman, on the other hand, calls her son *yememurakÉ* and her daughter *yememukunyá* and extends these terms to the children of any woman whom she calls sister. To designate her brother's

children she has only one term, *yepé'É*, which she extends to the children of all men whom she calls brother. She uses the same terms for the children of cross cousins as the man.

A man calls the children of his sons, daughters, nephews, and nieces *yeremuminó*. A woman, however, calls the children of her sons, daughters, nephews, and nieces *yeremíariró*.

In the parental generation, excepting in-laws, the terms for affinal relatives are the same for both male and female ego. Although father's brother's wife is designated by the referential term *aikamá*, mother's sister, only descriptive terms are used for father's sister's husband, *yaiÉ irú*, mother's sister's husband, *aikamá irú*, and mother's brother's wife, *apí amerikó*. A man calls his father-in-law *irayuwÉ*, and his mother-in-law *irayó*. A woman, on the other hand, uses the terms *yemenúp* and *yemení* in designating her husband's father and mother.

A man calls his brother's wife *kyewiÉ*, his sister's husband *niwarúp*, his wife's sister *mimiarúp*, and his wife's brother *itutti*. The terms used by a woman are different. She calls her husband's brother *kyewiÉ*, her husband's sister *yeukeí*, her sister's husband *irá iráí*, and her brother's wife *yeukeí*. The term for wife is *yamerikó* (my wife) and the term for husband is *yairú* (my husband).

A man calls his daughter-in-law *yememúraké*, and his son-in-law *iratúp* or *irairatí*. Although a woman calls her son-in-law by the same term as the man she uses *yemenutatÉ* to designate her daughter-in-law.

#### MARRIAGE REGULATIONS

Customarily a Camayurá will marry his *yatuháp*, cross cousin, for this is the "good" or preferred type of marriage. The term *yatuháp*, as we have seen, is applied to both male and female cross cousins, and neatly sets off, in one's own generation, marriageable kin from brothers and sisters. If a man is not able to marry his *yatuháp*, actual or classificatory, he can marry his *niwaí*, sister's daughter. In the case of a woman this would be marriage with her *apí*, mother's brother. No marriage between a man and his father's sister was recorded.

Although residence among the Camayurá is patrilocal there is a short period of matrilocal

residence after marriage during which the husband performs his bride service. This period is in essence a kind of trial marriage during which the capacity of the wife to bear children and the capacity of the husband to support his wife are tested. After the wife bears a child and the wife's parents are satisfied with their son-in-law, the man usually returns to his father's house with his wife and child.

If a man's first wife is barren, dies, or is otherwise unsatisfactory, he marries her sister. If he also takes a second wife he would try to marry his wife's sister. If for some reason a young woman is not able to find a husband, her sister's husband is obliged to marry her. In every case an actual sister is sought, for a man wishes to have only one father-in-law. Terminologically, of course, all female cross cousins are sisters to one another. In addition to the sororate and sororal polygyny, the Camayurá also practice the levirate, for on the death of a husband his wife passes to the care of his brother.

In practice there are many deviations from these rules. At the present time there appears to be a lack of marriageable women, perhaps due to polygyny, barrenness, and the death of women in childbirth. If a man is not able to marry a kinswoman, he will obtain a wife from one of the friendly tribes or with the help of his kinsmen he will try to capture a woman from the Suyá.

The periodic lack of marriageable kin appears to be a fairly common characteristic among the numerically small tribal groups in the Xingú. The Arawak-speaking Iwalapetí, who not long ago had their own village, have been forced to disband by marrying out. The Iwalapetí men, however, claim that once they have fulfilled their bride service they will reunite and build their own village, for they and their sisters now have enough children to reconstitute a self-perpetuating group. Other tribal groups like the Tsuvá, Naravúte, and Custenau have, on the other hand, been so reduced in members that they have had to unite permanently with other tribes of their own linguistic family.

Temporary matrilocal residence also usually applies only to first marriages. If a man marries his wife's sister he does not have to repeat the bride service. When a man obtains a wife from a friendly tribe, the girl's father decides whether bride service is necessary. Bride service, of course,



does not apply to captured women. The relative status of the tribes and their marriage customs are also important. Camayurá men and women insist upon living with their own tribe if they are married to Waurá or Trumai, for the Camayurá are accepted as having higher status. Camayurá men like to marry Waurá women, for they are the pot makers of the area and are also good weavers. Although Suyá women make good, hardworking wives, they are considered of low status and their children also carry this status. Nilo, for instance, would never discuss or admit the fact that his mother was a captured Suyá woman. But we were told he could never become a chief although his father, Tamapú, is the present chief. When daughters are married out the Camayurá father makes every effort to marry his daughter to an important man, such as a good wrestler or into a family where the men have a reputation for hard work.

#### EXTENDED FAMILY AND HOUSE GROUP

Although marriages outside the tribe temporarily complicate the general pattern, in the following generation or two the kinship system reasserts itself. In spite of the fact that there appear to be no clans or moieties, the marriage rules lead to a classification of kin into two groups. One group consists of fathers, brothers, and sisters, and the other of mother's brothers, their sisters and cross cousins. It is from this latter group that mothers and wives come and to which father's sisters and one's own sisters go. Terminologically, therefore, there are just two extended families related to one another through marriage.

In actual practice, however, the members of one's own extended family are separated into house groups. The house of Tamapú, for instance, was occupied by himself, his wife, four sons, two daughters, his son-in-law, his father's brother's son and his wife, and an old man whom Tamapú called brother. The core of the house group, therefore, consists of a group of brothers whose wives are sisters. The children call the men fathers and the women mothers. When the girls grow up they eventually pass over in marriage to the house or houses of their mother's brother and are replaced by their mother's brother's daughters.

Residence in a special house, however, is not

obligatory. A man, his wife, and children may move to another house occupied by his classificatory brothers. When the house group grows too large some of the men may decide to build a new house. Often brothers from other house groups, similarly interested, join them. The man who organizes the house building then becomes the chief of the new house and it is named after him. When the house chief dies his son or younger brother takes over and the house is named after him. In other words, the house groups are local representatives of two larger extended families.

The house group is a unit of close cooperation. The occupants cultivate a common manioc field and share its products. The younger men go fishing practically every day, sharing the use of the canoes which generally belong to the older men of the house. The women work together in processing manioc and piqui, the large pots being the common property of the house, having been obtained through trade by the house chief. The house group sometimes moves as a body in making visits or in assisting their friends in other tribes to plant or process manioc.

The communal activities of the tribe in fishing and gardening do not conflict with those of the house groups. When the village works together in planting, they work in one or another of the fields belonging to a house group. When the field of a certain house group is cleared or planted, all the male members of that house group are obliged to be present. The men of other house groups ought to be present but if they have other duties they need not participate. A young Camayurá, Takuní, whom I used as an informant for some time, explained one morning that he had to leave next day for the village, for his house group was going to work their field. But I observed that he did not feel obliged to assist the other house groups. Fishing with timbó, to be successful, demands more extensive cooperation, and all men in the village work together, sharing the fish caught.

There does not appear to be a definite position for the families within the house. Tamapú, on our first visit, occupied one end of the house and on the following visit had his hammock at the other end. One rule, however, appears to be followed—the son-in-law must sling his hammock

and that of his wife at the end opposite to that occupied by his father- and mother-in-law.

The primary functions of the house chief consist in the organization of the economic and ceremonial activities of his house group. In decisions concerning the whole village, the house chiefs and the tribal chief form a council and decide on a course of action. The tribal chief then announces the decision to everyone after dark or before sunrise the next morning and each house chief organizes his group to carry out the decisions, whether it be planting, fishing, house building, visiting, or ceremonial activity. He is master of his own family only. While others have to ask his permission to live in the house, he has no power to prevent families from leaving the house temporarily or permanently. Like the tribal or village chief, the house chiefs are elderly men, all are shamans, and all participate every night in meetings held around the fire in the central plaza. Here they smoke, discuss matters concerning the village, and make their decisions. Some of the house chiefs are important men, not only among the Camayurá but among the other tribes as well. When an Indian is asked who is the chief of the village he will mention the chief's name but will immediately name one or two other men who are considered chiefs as well. Among the Camayurá they always refer to Maricá as an important man. They also usually mention Jurúna who was captured as a boy from the Jurúna tribe. This appears to indicate that personal prestige is important, this prestige arising not from a possession of great wealth but from ability to be a good provider and good organizer of economic and ceremonial activities.

#### THE FAMILY

Although the family may be monogamous or polygamous, monogamous families are by far the most common. Only two men were observed with more than one wife, each having two wives. Each family hangs its hammocks together but not necessarily always in the same part of the house. Near them, the husband and wife keep their personal belongings such as bows and arrows, urucú paint, gourds of oil, baskets, waterpots, ornaments, and materials used in manufacture of twine, beads, and featherwork. At night each wife keeps a small fire going near her hammock.

In the two cases where a man had two wives it was the younger wife's hammock which was slung under that of the husband.

Although the family is always a part of a house group and carries on the basic economic activities in cooperation with the other members of the household, the family, nevertheless, has considerable autonomy. A man may take his wife and children into another house or even to a neighboring tribe. One man with two wives spent several weeks with the Trumai collecting terrapin eggs and planting manioc; a number of families remained in the camp of the Expedition for several weeks—during our stay in the region. Although families moved about at will, they never lost their rights in the house group to which they belonged.

The relationship between the cowives is very close and no apparent disagreements or conflicts were observed. They process manioc, fetch wood and water together, alternate in cooking food, and share in the care of each other's children. Younger sisters still below the age of puberty often live with their married sisters, participating in adult activities, particularly grinding manioc meal and baking *menyú*.

The authority of the husband over his wife increases gradually. For a year after marriage he lives with his father-in-law and is under his control. During this period he works in the field of his father-in-law, fishes for him, and carries out any tasks demanded of him. The wife also is still under the control of her father and mother. This is considered a test or trial period. If the young couple are agreeable to one another and if a child is born or on the way and the father likes his son-in-law the marriage is considered a success. But if these conditions are not present, the man himself or his father-in-law can terminate the marriage. These marital circumstances are illustrated by the case of Tamapú's daughter Tipurí. She is still, by common assent, accepted as the most beautiful woman in the tribe. When she reached puberty she was married to the champion Iwalapetí wrestler, but because the husband was not able to keep her from consorting with other men Tamapú sent the wrestler away and gave Tipurí to the wrestler's brother, Canatu, her present husband. Canatu is also a good wrestler and is also a hard worker. The couple now have



a child, and Canatu says that he can now go wherever he wishes. He says that when the Iwalapetí reestablish their village he will go and live with his own people.

Even after the husband has gained complete rights over his wife, he is still under the control of his father so long as the father lives. It is only after the father dies that the husband is the complete master of himself, his wife, and his children, this control being limited, however, by his membership in the house group and the tribe. The family as a structural unit, for which the Camayurá have no name, does not stand alone. It is always a part of the house group, the kindred, and the tribe. The autonomy which middle-aged men have over their families extends particularly to their children and the freedom of movement in visiting.

Once a husband is accepted by his father-in-law he is expected to control the behavior of his wife. Good wives, by custom, are supposed to remain at home, work hard, and take care of the children. But young wives are the target of young unmarried men and even of married men. Among mature men sexual intercourse with other men's wives is not considered a major crime. If a wife commits adultery the husband beats her but says nothing to the man concerned, often going fishing with him on the following day. Opportunities to commit adultery are provided at dawn when the young people go to the river for their morning bath, or when they go to fetch wood and water. It is not a difficult matter for a man to waylay a woman on the way.

Wife beating for adultery was overheard on more than one occasion. Yet several cases were known where an elderly husband ignored the matter completely and had to be admonished by the chief. On the other hand, faithfulness is also demanded of the husband by a young wife. On two occasions Tipurí accused Canatu of trifling with young married women. On both occasions she became so angry that she began to throw sticks and stones at him. To escape his irate wife, Canatu took refuge in the house occupied by the members of the Expedition. She followed him in and before about six whites drove her husband into the corner and proceeded to beat him with her hands. This continued until the head of the camp intervened and took her aside and calmed

her down. Canatu meanwhile remained indoors with a sheepish grin on his face until he too was reprimanded by the head of the camp.

As in any community, there were husbands and wives who behaved well and others who did not. There were also two young women who had been married several times, but as they had not given birth to children they were no longer wanted as wives. These two women moved about from house to house and even from tribe to tribe, consorting with various men but always returning to the house where their brothers lived. No particular criticism was leveled at these women. Sterile women eventually settle down with their brothers or sisters and live out their lives assisting their relatives.

Until the age of puberty the mother takes care of the children and exercises authority over them. Although the father and the grandparents assist in this task, it is the mother who orders the children about, calling them in to take their meals, and keeping them in the house after dark. Until about the age of 8 years the children have great liberty; having few duties they spend their time playing or just observing their elders. After this age they begin to participate in adult activities. The girls begin to process manioc and cook food and the boys go fishing with their fathers. Both the boys and girls, however, are still under the authority of the mother. At no time was a father observed talking angrily or striking his children. Mothers, on the other hand, often reprimanded their children for not carrying out the tasks allotted to them or for carelessly injuring smaller children while playing. This was particularly true of boys who played with bows and arrows. In administering corporal punishment, mothers slapped the children over the head and shoulders with their hand. Beating children with a stick was not observed. Fathers sometimes showed discomfort while the mothers were chastising the boys. One father even complained about the fact that the mother beat his son too often. In this case the mother was an Iwalapetí woman and the husband may have felt ill at ease because a woman of another tribe was beating his son whom he considered a Camayurá.

During puberty and afterward the children come under the authority of the father. This is particularly true of the sons. The puberty seclu-

sion is a severe test in itself and any infractions are punished by withholding food and in more complete isolation. After the puberty rites, improper conduct such as disobedience in carrying out tasks or by failure to show proper respect to relatives and elders is punishable by scarification. Refusal to undergo scarification as a form of punishment may lead to exile, the most severe form of punishment the Camayurá impose. Seclusion, even after a boy or girl has completed his or her allotted time at puberty, can also be resorted to as a form of punishment. Nilo, while at the Expedition camp, broke into a house with a few other boys and took a few blocks of "rapadura." The camp head complained to Tamapú, Nilo's father, who, when Nilo returned to the village, put his son in seclusion for about 2 weeks. The idea behind this form of additional seclusion is that the youth had not yet learned to behave as a grown-up and had to be treated as a boy at puberty.

After puberty the father continues to exercise great authority over his sons. They cannot marry or leave the village without his consent and must return home after a given length of time. Young men fear the anger of their fathers and try not to break the rules of proper conduct. One day the writer asked two young men to paint themselves in the designs used in the various ceremonies so that they could be photographed in color. The young men kept putting off answering the request. When presents were offered they explained that their fathers would not allow them to paint themselves in these colors which were used only at the time of the ceremonies. They agreed, however, to paint themselves in the woods. Later in the afternoon they stole some of their fathers' urucú paint and piqui oil, painted themselves, and were duly photographed in the woods after which they removed the paint by washing in the river.

Although daughters are in more intimate daily contact with their mother and follow her instructions, they, too, are under the authority of the father. He can punish them by scarification or seclusion for misbehavior or, as has been mentioned in the status of chiefs, they can be refused the symbols of rank.

The relationship between brothers is one of great intimacy, resting as it does on daily coopera-

tion in economic activities, mutual aid in cases of disputes with nonfamily members, and the fact that they are responsible for the upbringing of each other's children in case of necessity. At death the wife and children of a man pass to the care of his brother. Brothers, when young, are seen continually together, playing and imitating the activities of their elders. When mature they wrestle with one another, joke, and play tricks without any show of respect.

The relationship between sisters is similarly based on cooperation and is close and intimate. They may become cowives and may bring up each other's children. A brother is responsible for his dead brother's wife and children but if no brother exists, the widow will go to the house of her sister. If the mother is dead the younger sister may live permanently with her married sister, as was the case of Tipurí and her 10-year-old sister, as a sister is a much closer relative than a stepmother. This is also true of boys before the age of puberty. No special respect was observed between sisters and brothers. While Nilo was in seclusion his younger sister spent much of her time behind the screen preparing his food and talking to him.

The relationship in the family between parents and children, brothers and sisters, is one of intimacy. The father has unquestionable authority over the entire family. Until the children are about 8 years old the father plays with them and appears to be very indulgent. This attitude, however, changes at puberty. The attitude of respect for the father was quite noticeable in mature individuals. They spoke little with their fathers and listened with downcast eyes when the father spoke to them. While young children sat in the father's hammock older sons and daughters avoided their father's hammock. This respect is extended to the father's brothers. If a young man or woman behaves rudely toward his or her father's brothers the father might punish the offender with scarification. Mother's brothers, however, appear to have no authority over their nephews or nieces and no special respect is paid to them. The mother's sister is treated like a mother. The father's sister is treated with the respect due an older woman. The attitude toward cross aunts and uncles, of course, changes if they become in-laws.



Very clearly defined rules govern the behavior of in-laws. Bride service for a year during which the son-in-law must reside in the house of his father-in-law, establishes respect relationships which continue throughout life. Although brothers-in-law participate in gardening, fishing, and ceremonial activities, they show the greatest formal respect toward one another. A certain degree of physical distance must be maintained. They never place their hammocks near one another. Brothers-in-law cannot touch one another and they avoid going about arm in arm, which is common between young men. They cannot wrestle or talk nonsense or joke, nor can they use personal names when speaking to one another. It was amusing to observe Nilo when Canatu, his brother-in-law, entered the room. He would stop talking and slowly edge away, or if both were being used as informants at the same time they would be careful not to speak at the same time and would avoid meeting each other's eyes. If one used the name of the other when referring to another man of the same name he would spit, as if to avoid something due to mentioning his name. If any of these rules were inadvertently broken both parties would feel ashamed, but there appeared to be no formal punishment or compensation.

A son-in-law would show even greater respect toward his father-in-law. He would place his hammock at the end opposite that used by his father-in-law. He would wait to be spoken to by his father-in-law and would answer him with downcast eyes. A son-in-law must carry out all orders given to him by his father-in-law. It is his duty to cultivate the land, fish, hunt, and prepare arrows, baskets, and other objects for the use of his wife's father and her brothers. If the father-in-law is displeased with the conduct of his son-in-law he can reprimand him; if no child has been born he can send him away from the house. Once a child is born the position of the son-in-law becomes more secure and he can continue to live with his father-in-law or he can move back to his father's house.

A mother-in-law must be strictly avoided. A man can never speak directly to his mother-in-law but must speak through his wife or some other person. If he must speak, he looks away from her while speaking. Generally a man has little need to converse with his mother-in-law, as this contact

is maintained by his wife in the daily activities of the household.

#### THE TRIBE

The Camayurá tribe is a kinship society. The approximately 110 members of this society live in one village and in intimate day-to-day contact with one another. Kinship terms are not only applied to everyone but the actual kinship relationships of everyone are known. Men and women captured from enemy tribes are incorporated into the society through marriage and are given appropriate kinship status. Except for marriages outside the tribe, affinal relatives are also consanguineal relatives. Cross-cousin marriage and the conjugal family serve as mechanisms for the perpetuation of the kinship structure expressed in kinship terms and the body of rules which defines the duties and obligations and the forms of intimacy and respect between kinsmen.

As descent is bilateral, a genuine Camayurá is one whose father and mother are both Camayurá. Men and women incorporated into the tribe through marriage, although given status as in-laws, are not considered Camayurá. Their children, however, are half Camayurá and their grandchildren, if the children marry pure Camayurá, are accepted as genuine tribesmen. Nilo, for instance, is half Camayurá and half Suyá, owing to the fact that his mother was a captured Suyá woman. His father claims, however, that Nilo's children will be accepted as Camayurá. As more women than men are incorporated into the tribe, women of pure descent distinguish themselves by the three horizontal lines tattooed on their arms, as has already been mentioned. A Camayurá, then, is a person who can trace his or her descent back through both mother and father to the *camíuva* tree from which Mavutsiné made the original ancestors of the tribe.

This mythical event took place at Morená, a region where the Kuluene and Ronuro Rivers join to form the Xingú River—specifically on the long sand spit formed by the junction of the two rivers. As one stands on the sands of Morená surrounded by the bright green forest and listens to the murmur of the rapids a mile or so down on the Xingú, one cannot help thinking that the Camayurá chose ideal surroundings for their birth.

Mavutsiné, the myth tells us, lived at Morená. He was like a man but he had no father and no mother. He walked around Morená and felt lonely. One day he took a piece of wood and carved it into the shape of a woman. Then he made a cigar out of tobacco leaves and as he smoked, he blew smoke over the wood and stroked it with his hand. Little by little the carving began to live and finally turned into a beautiful woman. Mavutsiné called her *Noitú* and took her as his wife. He had sexual intercourse with her, and she began to swell. She became bigger and bigger until she gave birth to a child. This first child was the sun, *kuat*. Then once more Mavutsiné had intercourse with *Noitú* and again she grew bigger and bigger until she gave birth to another child. This child was the moon, *yai*.

After creating *Noitú*, the sun, and the moon, Mavutsiné made the Camayurá out of *camiuva* wood. First he made *Karanavarí*, *Kanaratí*, and two women. Then he made *Yanamá* and *Vanivaní*. He made them early in the morning and the people were so cold and stiff they could hardly walk. All that day Mavutsiné sang and shook his gourd rattle. Slowly he led the people to a fire and as they warmed themselves the stiffness left their joints.

Then Mavutsiné told the men to make four villages: *Karanavarí* made a village at Ronuro, *Kanaratí* at Urukulú, *Yanamá* at Morená, and *Vanivaní* at Vanivaní. He told them to bathe in the river at dawn and to whistle while they bathed. He told them to have sexual intercourse at night and to work during the day.

After this Mavutsiné made all the friendly tribes of the Upper Xingú. The enemy tribes were made by the moon. Mavutsiné also made two sisters called *Tanamakarú*, who gave birth to the *Caraiba*, white men. He told them all where to settle.

The Camayurá consider themselves a distinct people because Mavutsiné created them from *camiuva* wood, and they also believe that the territory around Morená is theirs by divine right. The leaders of the Roncador-Xingú Expedition say that the places mentioned in the origin myth as being settled by the first Camayurá show signs of old settlements. One of these places was visited and the numerous large piqui trees were unmistakable evidence of previous habitation.

Furthermore, the origin myth is no idle tale told around the evening fire but is a living belief, for every year during the *kwarúp* ceremony the creation story is reenacted.

The Camayurá no longer live at Morená although they lay claim to the piqui and mangaba trees and the rights to fish and collect turtle eggs in the area. The Trumai live in the area by the consent of the Camayurá, and others can use these waters by permission. The Suyá, Shukaramái, and the Jurúna sometimes invade this territory, leading to open conflict. While the Camayurá care little about fishing in the main streams by the friendly tribes, they maintain sole rights to the small tributaries near their villages of Tuatuari and Ipavú.

At the head of the tribal organization is the chief (*morerekuát*). Although no specific myth or tale was obtained about the origin of chieftainship, the occurrence of the word for sun (*kuat*) in the term for chief appears to indicate some relationship to the sun. It was also observed that some women who were members of the chiefly family had three small parallel lines tattooed on their wrist or on their shoulder. These lines, although specifically named *yu*, were also called *morerekuát* and the women claimed that it showed that they were related to *Noitú*, the mother of the sun, the first woman. There appears to be no doubt that the chief and his male relatives belong to a group that holds rights to chieftainship.

The present chief, Tamapú, although having chiefly rank, is not considered in the direct line. The former chief who was killed about 5 years ago by the Shukaramái was considered of higher rank. Some of this difference in status is due to the status of mothers. Although Nilo is the eldest son of Tamapú, the chief claimed that Nilo would not succeed him because his mother was a Suyá. The two younger boys, whose mother was high caste, are, he said, eligible to chieftainship. The chief's present wife is not considered of chiefly status so that her baby son likewise is of lower status. When asked about his eldest daughter married to an Iwalapetí, Tamapú explained that although she was of high birth she did not wear the marks of the chiefly class because she had misbehaved morally, this being her second marriage. This seems to indicate that chiefly rank



although obtained through birth is maintained through correct behavior.

The rule of birth and correct behavior is followed when the question of succession arises. The mature men in council decide which of the dead chief's relatives are to succeed him—a son, a younger brother, or a brother's son. In addition to these two factors, the chief is always a *payé*, shaman. Quite early in life he must prove his aptitude in getting in touch with his *mama'é*. Besides his shamanistic powers he must be a man versed in tribal lore and customs, an economic and ceremonial leader, a councilor and settler of disputes.

As has already been mentioned, the chief organizes all communal fishing trips, clearing and planting activities, movements from one village to another, the reception of visitors, and the making of trading and ceremonial visits to the villages of the other tribes. His instructions are given after dark in the evening or before sunrise in the morning. With bow in hand he walks around the plaza of the village stopping before each house to make sure that everyone hears him.

Our first visit to the Camayurá village was followed by one of these reception speeches. After all of us had gone to our hammocks and the village had settled down for the night, Tamapú's strong voice could be heard speaking in the soft, nasalized accent of the Tupí language. He mentioned each of us by name (five men), why we had come, and according to one of the group who understood some Tupí, repeated word for word what each of us had said during the course of the afternoon and evening. This and subsequent speeches revealed Tamapú to be an able orator and a man possessing an exceptional memory.

Although the chief is a man of rank, respected for his wisdom and leadership, there is nothing in the way of external symbols to mark him apart from the rest of the tribesmen. His house is like those of the others, he has no special ornaments, he works with the other tribesmen, and he is not given food or other gifts or tribute. His difference in position is shown by his functions but, as we shall see later, his status as chief is shown in a particular form of burial.

Whether the Camayurá tribe is to be considered a political group depends upon how one wishes

to define a political society. It is true that the Camayurá lay claim to a certain territory and if attacked will defend themselves and their territory as a unit. Yet raids into enemy territory for the capture of women and children or to settle feuds created by former raids or counter-raids are not made by all the men of the tribe but by a number of young men under an elected leader. The Camayurá are emphatic in saying that the chief is not a war leader. If the village is attacked he will, of course, assist in the defense, but he never organizes defense or attack. In other words, there is no explicit extrafamilial bond which unites the Camayurá on a territorial basis and under a chief for the purpose of exercising force against the neighboring tribes.

In the maintenance of internal order there is the same absence of authority invested in a single person. The chief has no judicial powers backed by force. The only specific crime against the group as a whole which the Camayurá could recall was the breaking of taboos surrounding sacred objects. And here, too, the measures taken referred only to women. If a woman, even by accident, were to lay eyes on the sacred flute (*jakwi*) all of the men of the tribe would take her into the woods, have sexual intercourse with her, and leave her to die. The only other case in which the whole group would take action against one of its members occurs when an individual repeatedly breaks group customs. A mean, quarrelsome individual who constantly injured others physically would be exiled from the tribe.

Besides banishment from the tribe there appears to be no other way of punishing injuries committed by one person against another. In fact, the Camayurá say that only individuals who are under the influence of witchcraft would hurt others. The Villas Boas claimed that they had never seen or heard of fighting between the men of the village. When asked about stealing, the Camayurá would laugh and say that only children took things away from one another. No action was taken against an adulterer, who generally was an actual or classificatory brother. They could not recall that anyone had ever committed incest and could say nothing about its punishment.

Although the Camayurá fear witchcraft, they say that blood relatives do not practice witchcraft against one another. All the individuals whom

they accused of having caused illness through witchcraft turned out to be members of other tribes or men who had married into the tribe. If it were believed that someone caused the death of a person through witchcraft, such a person could be killed by the brothers of the victim either by direct force or by counterwitchcraft. However, no cases of this kind were discovered.

We have seen that the Camayurá divide their neighbors into enemy tribes and friendly tribes. Relationships with enemy tribes are on a permanent war footing characterized by raids and counter-raids. The members of enemy tribes are well known. Their names are remembered and a record of the past deeds of every enemy warrior is kept alive to be settled at some future date. When recounting a raid the Camayurá mention by name the enemies who were killed. Jurúna who was taken from the Jurúna tribe when a boy explained that in a certain raid in which he participated as a member of the Camayurá, his father was killed. Witchcraft, however, is not practiced against enemy tribesmen.

Relationships with friendly tribes, on the other hand, are characterized by trade, intermarriages, and joint participation in ceremonies. While the relationships are friendly they are tense. When other tribes visit the Camayurá, they enter the village very formally. Ceremonies and trade are carried on according to strict rules of etiquette. At night the visitors withdraw from the village and sleep in the woods. The element of competition in ceremonies and trade give rise to suspicions and in some cases to ill feeling. These enmities are believed to be the causes of witchcraft. Yet these individual suspicions and tensions do not appear to lead to open ruptures between the Basin tribes and are to some extent counter-balanced by kinship bonds established through intermarriages.

The sanctions which govern the behavior of the Camayurá are inherent in the kinship relationships. Every individual knows from childhood what his duties and attitudes toward prescribed classes of relatives are to be and what he can expect from them. The chief is an economic and ceremonial leader, guiding communal activities prescribed by custom, and carrying out decisions reached by common consent. Ultimate authority rests in the tribal council which meets nightly around the

fire in the center of the village. The council is composed not only of the chief and the house chiefs but of all mature men. The decisions made by these men, who are kinsmen, is binding upon the women and children and those young men who have not, as yet, had shamanistic experiences and who thus have no right to smoke. This society, based on kinship, carries out political functions in so far as force is exercised, but we would look in vain for any relationship other than kinship that binds individuals to the chief and which gives the chief rights to exercise authority sanctioned by force.

## RELIGIOUS BELIEFS AND CEREMONIES

In his brief but accurate description of Camayurá masks and dances, Von den Steinen (1894) stresses the artistic aspect of the dances, masks, headdresses, and other ceremonial gear, and as the Camayurá stated that the designs represented fish and birds, he was led to the belief that the ceremonies were merely fish and bird dances. Our investigations of Camayurá ceremonial life, on the other hand, had not proceeded far before it became clear that the rituals, in particular, were complex affairs in which a belief in spirits, spirit impersonation, and the use of sacred objects were definitely related to a concern over the perpetuation of the tribe, the security of the food supply, and other economic resources. Underlying not only the religious beliefs and practices but the entire economic and social order are the myths which account for the world as it appears to the Camayurá.

## ORIGIN MYTHS

A very general type of culture hero in South American Indian mythology is a supernatural being who finds and releases Indians from the earth or from mountains, later establishing them in certain areas and giving them, if not all, many of the principal elements of their culture. Mavutsiné differs from this kind of culture hero in that he created the sun and the moon as well as the Camayurá, their friendly Indian neighbors, and the two women who later gave birth to the *Caraiba*, white men. These acts made Mavutsiné more of a creator than a culture hero. Although the Camayurá say loosely that Mavutsiné created



everything, yet specific myths relate only the creation of the sun, moon, man, and many of the primary elements of their culture. It would appear that the land, rivers, trees, animals, and fish already existed, for we first hear of Mavutsiné walking around Morená and feeling lonely.

In the creation story wood plays an important part. *Noitú*, the first woman, was made of wood. The word *Noitú* seems to contain the stem *utú*, grandmother. Mavutsiné then married *Noitú* who gave birth to the sun and the moon. According to the Camayurá, the sun and the moon are brothers but not twins. The ancestors of the Camayurá were made by Mavutsiné from the wood of the *camiuva* tree. The word *camiuva* appears to be made up from the two stems *cami* plus *uva*. *Uva* in Tupí is the leaf of a tree. The word *Camayurá* also is made of two stems, *cama* plus *ivirá*. *Ivirá* in the Camayurá dialect means tree. The stem *cami* or *cama* looks surprisingly like the Arawak word *kame*, sun. If this analysis is correct the Camayurá are people of the sun tree. The *camiuva* tree has, even today, magical significance and is in a sense the sacred tree of the Camayurá, for from its wood they make the central posts which support the ridge pole of the house and the posts used in the annual ceremony for the dead.

The mythical period did not end with the creation of *Noitú*, the sun, the moon, and the ancestors. There appears to have been a time during which all these beings lived together at Morená in a village called Morenáwas. In this period many events took place, only some of which were clearly described to us by the Camayurá. The sun, *kuat*, seems to have been a great benefactor in his own right. He taught all the Indians how to use timbó in fishing. After Mavutsiné had made the *jakui* flute he handed it to the sun who played it so well that Mavutsiné gave it to him. The sun then taught the ancestors how to play it and presented it to them as a gift. Later he taught the Camayurá all their songs and dances and the puberty rites which they must practice. Among these ceremonies the annual *kwarúp* is of the greatest importance. The word *kwarúp* seems to contain the stems of *kuat*, sun, and *irúp*, father or ancestor. The moon, *yai*, although a lesser figure, also performed creative acts. He taught the people how to make fire, in addition to per-

forming rather a foolish act by creating the enemy Indian tribes. The mythical ancestors also performed many miraculous and culturally important acts. *Yanamá*, for instance, created *tupân*, thunder and lightning, well known in Tupí mythology. From *aikán*, the fish, *Yanamá* obtained the bull-roarer (*urivuri*) in exchange for toucan feathers. Later *Yanamá* gave the bull-roarer to the piqui tree who taught him how to make piqui oil. *Kanaratí*, another ancestor, captured the large hawk (*apacaní*) which brought death to the world, and rode into the sky on its back visiting the world of spirits. The Camayurá now believe that the airplane is *apacaní* returned. In these mythical times, too, there was a great flood, although the Camayurá gave no clear account of it.

The four ancestors appear to have had incestuous relations with *Noitú*, for although Mavutsiné made two women at the time he created the ancestors they say nothing about these women marrying the four men. *Noitú*, who sometimes is described as being a woman, is also described as a jaguar. She is the wife of Mavutsiné, the mother of the sun and the moon, and also the secret wife of the four original ancestors and it is from her that the Camayurá sprang. Mavutsiné himself could take on many forms. Sometimes he is described as having no thumbs.

In the myths there is also a hint of evil caused by the shortcomings of the original ancestors. The Camayurá made a bad choice when they ignored the guns and chose the bows; they are weaker than the white men because of this mistake. For their carelessness in not guarding the original manioc field planted by *pakoin*, manioc has never grown so well since. The capture of the hawk (*apacaní*) brought death to the world. Incestuous relations with *Noitú* angered Mavutsiné and may well have caused his departure along with *Noitú*, the sun, and the moon.

#### THE MAMA'É

Before Mavutsiné and the other mythical beings left, he created the *mama'é* spirits to watch over the welfare of the Camayurá. The word *mama'é* appears to be derived from the word *amá*, mother. The spirits are individualized and intimately connected not only with the health of the people but also with the growth of the animal and plant species upon which the welfare of the people

depends. The Camayurá state that all the Upper Xingú tribes have these spirits. The *olé* spirits of the Trumai, *papataim* of the Waurá, the *apapaliú* of the Iwalapetí, the *mopít* of the Auetí, and the *etséke* of the Cuicúru and the Calapálo are referred to by them as *mama'é*. They also add that shamans from various tribes often work together in soliciting the aid of the *mama'é*.

The *mama'é* are said to live in the woods and in the air and can be seen and heard by the shamans or initiates. They appear to have various forms and some are much more powerful than others. When a man speaks of his own *mama'é*, he describes them as being dwarfs with white hair and long black beards. The *mama'é* connected with plants are described as being birds, insects, animals, and fish. In some cases no description of the spirit was obtained beyond the symbols carved on posts or masks.

When questioned as to what happened to an individual after death the informants kept repeating "*mano, hopap*" (dead, finished). In an effort to ascertain whether the informants knew what the question on hand was, we explained the idea of soul and ghost. The informants appeared to understand, for one man claimed that the Suyá have such a belief. He related that a captured Suyá woman got up one night to put wood on the fire and saw her dead brother standing nearby; but he then went on to say that the Camayurá do not see people after they are dead. The above statement appears to indicate that the Camayurá believe in ghosts (*ang*) but that they do not see them or fear them.

#### RITUALS

The ritual center of the Camayurá village is the *jakui* or flute house. Although at present only partly built, the Camayurá informed us that when completed all the sacred objects used in the dances would be kept there. Among these sacred objects, the three *jakui* flutes appear to be of the greatest significance. These flutes are about 36 to 40 inches in length, 3 inches in diameter, and are made of cane (perhaps a large piece of uba cane). Just back of the mouthpiece there is a hole and at the lower end there are four holes used for finger stops. A series of diamond-shaped designs in black cover the upper surface of the

flute. When playing the flute the player is seated on a stool, his head thrown back and his arms stretched to the limit so that his fingers can reach the stops at the lower end. During ceremonies the three flutes are played together, the players being seated next to one another. The *jakui* flute has a deep resonant tone not at all unpleasant to a white man's ear.

These flutes, as has already been mentioned, were made by Mavutsiné and presented to the Camayurá by the sun, who also taught them the *jakui* songs and the dances which accompany the tunes. The *jakui* flutes, in addition, have a powerful *mama'é*, called by the same name, which appears in the form of a bird. The term *jakui* is also the Camayurá word for the jacobí, a large bird related to the curassow family.

Another flute which is considered sacred and dates from the mythical past is the *kurutai*. This flute is similar in form to the *jakui* but is only 20 inches in length and about 1½ inches in diameter and is made of bamboo. It also has a *mama'é* and is kept in the flute house, but we were unable to determine the form of its *mama'é*.

Closely associated with the *jakui* flutes is the sacred *jakui ikatú* mask which may be no more than a symbol for representing a *mama'é* of the same name. The mask is carved from wood in the likeness of a human face. These masks are well described by Von den Steinen (1894) who associates them with the fish dance of the Auetí and Camayurá.

The *yokaká* is a special gourd rattle that is used in many of the dances, particularly in the *kwarúp*. As this rattle was not seen, no description of it can be given.

Another sacred object of great importance is the *urivuri*, bull-roarer. It has a *mama'é* of the same name and was given to Yanamá by *aikán*, the dogfish. The bull-roarer is about 18 inches in length, is shaped like a fish and is covered with painted zigzag lines or diamond-shaped designs in red over a black or white surface.

At least these five sacred objects are tabooed to women in so far as women are prohibited from touching or even seeing them. These objects are kept wrapped in bark and fiber wrappings when not in use. If a woman were to see any of these objects her hair would fall out, she would swell, and become very ill. In the case of the *jakui*, if



any man observed a woman looking at this flute she would be subject to gang rape and then left to die in the forest. Another version of the story states that the woman is obliged only to have sexual intercourse with all the men in the village in order to assuage the anger of the *jakui*. As the men in the village include the father and many who are brothers of the woman, this act would imply incest. Gang rape, however, does not seem to apply in case a woman breaks the taboo in connection with the other sacred objects.

These five objects date from the mythical past. The *jakui*, *kurutai*, *jakui ikatú*, and the *yokaká* are gifts from *kuat*, the sun, while the *urivuri* was given by *aikán*, the dogfish, who assisted in planting the original manioc field. They all have powerful *mama'é* who, although the special guardians of fish, can be called on for other kinds of assistance also.

There are other sacred objects that represent *mama'é* which are not tabooed to women and in the rituals of which women can, in some cases, participate. These objects and their attendant *mama'é* are closely allied to certain plant species of great importance to the Camayurá. Among these are the three posts representing the *mama'é* of manioc, the headdresses representing the *mama'é* of the piqui tree, the jatobá tree, the genipapo tree, and the urucú bush.

The three manioc *mama'é* are represented by three sacred posts on which the conventional symbols are painted. The *ihít* is in the form of a T about 12 inches in length. The *ivét* is a half-moon about 6 inches in length, and the *ivirát*, three vertical lines about 36 inches in length. It is interesting to note that the word *ihít* is also used for the carved stick with which manioc roots are dug from the ground, and the *ivét* is of the same shape and size as the *menyú* turner (*ivép*). The word *ivirát* signifies wood or tree, the term also being used for the digging stick employed in planting, which we sometimes heard as *ihirát* or *ihirá*. The similarity between the spirit emblems and the principal tools used in cultivating and preparing manioc for food is striking.

Although the Camayurá stated that rituals were performed in connection with the growth of manioc we were not able to observe them. Von den Steinen (1894), however, refers to masks and masked dances, called *hüvát*, in which 2 staves 80 cm. long,

called *hakté*, were used. The resemblance between the word *ivét* and *hüvát* is close, and when he describes the staves as having dogfish teeth attached to a triangle, fixed to a T at the end of the staff the comparison with the T-shaped *ihít* is difficult to avoid. Von den Steinen then goes on to explain that the *hüvát* is a fish dance similar to the *koahálu* of the Auetí. The only direct connection we were able to obtain between manioc and fish was the origin myth in which the mythical gull (*pakoin*) obtained the help of fish, particularly the dogfish (*aikán*) and the *wahiú* to plant the first manioc field. Although the Camayurá did not state that the symbols represented fish, it may very well be that the symbols represent fishlike guardian spirits who originally gave the Camayurá manioc and the implements for its cultivation and use. Of course, if in the future some observer were able to see and analyze the manioc ritual, presumably the connection between the myth, spirits, symbols, and manioc itself would be clarified. The writer feels fairly certain, however, that the symbols do not relate to actual fish or to the *mama'é* of fish (*yakuyéép*) but to fishlike guardian spirits.

There are two headdresses which represent *mama'é* that are considered by the Camayurá to be closely connected with the piqui tree and its growth. One is the *kinemeú* which looks like a skullcap of woven burití fiber, to the top of which is fixed a cross about 12 inches high. The cross is said to represent an insect which lives in dead burití trees and which the Camayurá draw on paper, as shown in figure 2. The other is the



FIGURE 2.—An insect, which lives in dead burití trees, represented by cross in headdress, as drawn by the Camayurá.

mask *mawurawá* which represents another insect similar in form to that represented in the *kinemeú* but with longer antennae.

## RITUAL DANCES

The beginning of the rainy season is signalized by the sounds of numerous insects and the roll of distant thunder to the northeast. Late in August when we heard a certain large cicada in the woods, the Camayurá would say that the rain is coming soon. These sounds are a signal not only for planting but for a cycle of ritual dances, which the Camayurá call *kwarúp*.

In addition to being the general name for the ritual period lasting several days, the *kwarúp* is a special dance in commemoration of the dead. All those who have died during the year are represented by wooden posts cut from the *camiuva* tree. These posts are about 3 feet long and 10 inches in diameter with vertical lines of triangles painted on them in black and white. The posts representing men have faces carved on them and are decorated with cotton belts, feather head-dresses, and designs painted with genipapo and urucú.

These posts, called *kwarúp*, are prepared in the woods and are brought into the village just before dawn on the shoulders of the men. While the posts are underway all the women and children must remain hidden in the houses behind closed doors, and visitors from neighboring villages must remain outside the village. As the men enter the village they walk slowly and stiffly singing a song while the leader shakes the sacred rattle (*yokaká*). The posts are then set into the ground in a row in the center of the plaza.

A special messenger, called *pariá*, then goes out and brings in the visitors, leading them with a burning brand. The women and children come out of the houses and everyone gathers around the posts and begins to sing. Customarily there are four leading male singers. In the origin myth these four singers were two cotias and two frogs. This is also the occasion during which all the boys and girls who have been in puberty seclusion come out and dance around the posts, the girls with their long hair pulled down over their faces. One of these girls offers the village chief and the visiting chiefs a little of last year's piqui from a gourd vessel. Later these girls have their hair cut, put on their ulurí, and are considered mature marriageable women. In fact, as the marriages are already arranged, the grooms cut their bride's hair and

the brides tonsure their husbands. When the *kwarúp* is finished the posts are thrown into the river.

On analysis the *kwarúp* appears to be something more than just a dance for those who have died during the year. In the 1947 *kwarúp* the Villas Boas stated that nine posts were brought into the village although nine people had not died that year. One day I drew a number of posts on a piece of paper and asked one of the Camayurá whom they represented. Without hesitation he named the first four as *Kanaravari*, *Kanaratí*, *Yanamá*, and *Vanivaní*, in other words, the four original ancestors. He then mentioned two names which I took to be the names of important men who had died in the past and three posts he called simply *kwarúp*. As the Camayurá do not use the names of people for some time after death I concluded that these three represented members of the tribe who had died during the year. Furthermore, the posts are cut from the sacred *camiuva* tree from which the ancestors were first made, a rattle is used, and the song sung around the posts is the same as that sung by Mavutsiné when he created the Camayurá. These facts seem to indicate that not only do the ancestors come back to join the tribe for the *kwarúp* and to receive the dead but that the whole ritual strangely suggests a reenactment of the creation myth. The word *kwarúp* itself has a resemblance to the stems of the two words *kuat* (sun) and *yerúp* (my ancestor) and also to *irú* (husband) which with *apitahók* are the terms used for marriage. The joining of the young people in marriage in the presence of the ancestors and the living appears to be a symbolic act the purpose of which is to perpetuate and increase the tribe. The Camayurá say that if they do not perform the *kwarúp* the tribe would die out. As their origin was due to a creative act of Mavutsiné, so their perpetuation depends upon the annual reenactment of the myth in which a tribal marriage ceremony is performed in the presence of the ancestors.

The *tavurawá* follows the *kwarúp*. In this dance a number of men dressed in burití fiber skirts, with feather headdresses and with leafy boughs fastened to their arms and shoulders dance around two men stationed in the center of the plaza. One of these men is seated on a stool beating the ground with a large gourd which



emits a dull booming sound. The other man stands just behind him shaking a rattle. Around all the men dance a number of women. On the following day women with long-tailed ulurí dance in circles. On the third day a woman comes out of a house and is followed by a number of men in skirts and headdresses; they dance around the plaza stopping before each house.

The Camayurá explain that this dance is given to make trees and plants grow, particularly the piqui and mangabeira. The beating of the gourd may represent thunder and the swaying bough-covered dancers may represent growing plants. Support for this interpretation is given by the fact that if rain is slow in coming the dance can be repeated with the use of the *urivurí*, bull-roarer, which is specifically used to induce rain.

Then comes the *turuwá*, which is the dance of the jatobá tree spirit. A man impersonates the spirit dressed in ceremonial attire. As Von den Steinen saw one of these dancers fully dressed we shall use his description of the *turuwá* dancer:

Besides the masks for the *húvát*, we observed among the Camayurá an enormous web that looked like the *hualóq* of the Bakairí, having more or less the form of a mushroom with cap and stem. The upper part of the body of the dancer was covered by the cap more or less to the umbilicus and the stem of the mushroom was formed by the hanging fibers. One could see painted with the "mereschu" pattern a quarter of the surface of the cap limited by pieces of sipó resembling antennae; on the top of the cap rested another stem more or less like the *imeo* of the Bakairí but covered with thick woven material painted with the same designs and finishing in a grass edge. The object is called *turua*; in Guaraní *turú* means "various creatures that live in water," which in Tupí according to Martins its meaning is *Tentheredo*, a kind of wasp [Von den Steinen, 1894, ch. xi, p. 317].

The *turuwá* is followed by the *kinemeú* or the dance of the piqui tree spirit. The *kinemeú* headdress with its antennae represents an insect, as we have seen. The dancer, in addition, wears a burití fiber skirt and cape so that he is covered from head to foot. He dances to the accompaniment of singing and the shaking of rattles.

In the *kwarúp* cycle, there is at least one more dance called the *kuhahá*, about which, however, we were not able to gather any information.

In December when the piqui fruit ripens the Camayurá go to the old village of Ipavú to perform the *mavurawá* dance in honor of another piqui spirit. During the dance a man imperson-

ates the spirit, dressed in a costume very much like the *kinemeú* but with longer antennae. He is offered boiled piqui fruit and eats with the people while they sing. Men, women, and children participate in the ceremony. At night the men play the *jakui* flute in the flute house. Following the *mavurawá* there are no more tribal ceremonies until the beginning of the dry season in April when the cycle of *jakui* dances begins along with the secular dance, the *yawarí*.

#### THE JAKUI

At the beginning of the dry season in April when the rivers begin to go down and the products of the field and forest diminish, the Camayurá begin increasingly to depend upon fish for their daily food. Associated with the change in the season and in economic pursuits they hold a series of rites connected with the *mama'é* of fish, known collectively as *jakuyéep*. These masked *jakui* dances are performed by men only, either in the flute house or in the plaza. During the performances women and children must remain secluded in the houses. In addition to the masks, the dancers wear headdresses representing birds and animals. Although a number of these headdresses were seen, the Camayurá were reluctant to say much about them so that no detailed information about the performances were obtained. They admitted, however, that one of the most important of these masked dances was the *jakui ikatú* (the good or great *jakui*). In most of these dances rattles are used and, in some cases, as in the *jakui ikatú*, the flute *jakui* is played. About the purpose of these dances the Camayurá say little except that they help "to bring the fish."

The sacred *jakui* rituals are followed by the great public ceremonial known as the *yawarí*. For this game or contest the Camayurá always invite one of the neighboring tribes, such as the Waurá, Auetí, or the Trumai. The *yawarí* was obtained by *kuat*, the sun, from a mythical tribe known as the *Panyetan*, who later presented it to the Camayurá. Another version is that it originally belonged to the Trumai who taught it to the other tribes in the Upper Xingú.

The *yawarí* is essentially a contest in which representatives of two tribes try to strike each other by throwing an arrow with the spear thrower

(*aravú*), the man serving as a target trying to avoid the arrow by shielding himself behind a bundle of sticks which he holds upright in his hand.

The word *yawari* in Camayurá means a species of wildcat (*Felis pardalis*). The performers cover themselves with white clay over which they paint red or black spots resembling those of the jaguar, which often covers the face, chest, arms, and thighs. Some also paint themselves with designs which look snakelike in appearance. The ankles and knees are wrapped with embira lacings and the performer wears the customary belt of cotton string. The arrows or spears are from 5 to 6 feet in length, tipped with a round tucum nut in order to avoid puncturing the skin if a performer is hit. The shield consists of a number of sticks about 7 feet long tied together to form a round bundle about 10 inches in diameter. While the lower end of the bundle rests on the ground the player moves the bundle from right to left in front of him so as to meet the flying arrow or to cause it to glance aside. The object of the contest is for the thrower of the arrow to strike the defendant in the legs. The side which gets the greatest number of strikes is the winner. Although blunted arrows are used, many severe bruises are sustained by the players.

Galvão, who saw the *yawari* at the Camayurá village, describes it as follows:

When we arrived at the Camayurá village, a group of young men were being trained to dispute the *iawari* with the Waurá or the Auety. The target was a straw doll. They decided to meet the Auety whose village was nearer than that of the Waurá. To this village, after intensive training, were sent three messengers who, on their return, brought a piece of *emvira* (bark) in which were five nuts to indicate the number of days it would take for the Auety to arrive. The visitors were presented with large quantities of food for they camped outside the village. On the night of their arrival the Kamaiurá lit fires in the plaza and practiced shooting at a straw doll. The Auety did the same, retiring to their camp after their chiefs had talked for some time with the Kamaiurá chiefs. On the following day the *iawari* contest took place, lasting for two hours. The Kamaiurá came out the winners. The two groups of men lined up—each facing one another, dancing and singing, while in the space between a player was trying to spear his antagonist. When the contest was over the Auety retired to one corner of the plaza where one of the Kamaiurá chiefs armed with a bow and arrow knelt in front of the Auety and made a speech and wept. Women accompanied the speech wailing in a loud voice.

Over a pot of manioc porridge were placed two spear throwers with their respective arrows which were later burnt. The Auety then left being again presented with gifts of meal, sweetpotatoes and beijos [Carvalho, 1949, pp. 44-45].

#### CEREMONIAL DRESS

The standard dress of a man is a fine burití fiber string around the waist, called *yakualáp*; that of the women, the *ulurí*, or *tameoháp* as it is called in Camayurá. Better dressed men and women add to this the *moit*, a string of small flat snail shell disks. Women wear the *moit* around their necks while the men wear it around their waist. Today blue or red "store" beads are often substituted for the snail shell disks. A more highly prized necklace, made from rectangular pieces of snail shell, called *yepoit* is worn on ceremonial occasions. On special occasions the men also wear a narrow cotton band (*ininobutikó*) tightly bound above the biceps on both arms. When yellow feathers are glued to the arm band it is known as the *ariwarí*. Both men and women also wear a narrow cotton band just below the knee known as the *yeiwikwáp*, and on all festive occasions the men wrap their ankles with many yards of embira bark lashing to the width of about 8 inches. This binding is known as *yepitawáp*. As urucú is used almost daily all materials take on a reddish-brown color. When participating in dances the women wear a special *ulurí*, the tail of which sticks out stiffly behind their buttocks to about 8 inches. Diadems made from red and yellow macaw feathers with three long feathers standing upright over the forehead are worn by men in many of the dances. In addition to burití skirts and capes, featherwork capes are reported but were not seen. Small earplugs and long feather pendants are common among men.

In addition to the seasonal rituals associated with the *mama'é*, the Camayurá have a secular dance called the *uruá* which can be performed at any time. The word *uruá* is applied both to the flute and to the dance. The *uruá* is a double flute made by fastening together two long tubes of bamboo, the long tube being 7 feet in length, the shorter tube about 5 feet. Each tube is made by joining two halves of bamboo cane together with pitch and lacing. Although the tubes are about 2 inches in diameter and long, they are, however, quite light. The *uruá* flutes are played



in pairs, the two players moving side by side. The flute has a deep resonant tone with a high and a low note.

The two players begin playing inside of a house, come out, face one another moving back and forth, swinging the flutes to right and left, then side by side they move rapidly until they come before the doorway of the next house, repeat the swaying movements, enter, come out, and repeat again before moving to the next house. They move from house to house, going around the plaza in a counterclockwise circle. The rhythm of the dance is stamped out by the right foot. Beginning usually at about 4 o'clock, the dance continues until dark. As they proceed two women painted with urucú and with the ulurí string sticking out behind join them. Each follows the man in front of her with one hand on the man's shoulder.

Besides the two sacred flutes, the *jakui* and the *kurutai*, and the secular flute (*urudá*) the Camayurá have the pan pipe, *aviraré*. The five slender bamboo tubes, graduated in length, are held in the left hand without being bound together. Almost every young man has a set of these pipes which he plays whenever he is in the mood. They appear to have no ritual significance and are not played in any group performance. These four flutes and the rattle appear to be the only musical instruments of the Camayurá. No drums were observed.

It must be mentioned that the public ceremonies like the *kwarúp* and the *yawarí*, in which the neighboring tribes participate, are not restricted to dances alone. These public gatherings afford opportunity for trading (*moiterá*) for wrestling contests and feasting. Wrestling (*oyetúk*) is an important form of entertainment throughout the Upper Xingú area. For weeks prior to the public ceremonies young men train for the wrestling contest and each tribe selects a number of champions, weight being taken into consideration. Just before the contests the champion wrestlers avoid sexual intercourse, live on a restricted diet, and sleep in the woods. The wrestlers meet in the center of the plaza, each man being painted with urucú and wearing the usual arm and leg bands. The two contestants face each other in a crouching position and for a moment go around in a circle facing each other and pawing the

ground with one hand uttering *huca, huca, huca*, in a loud challenging voice. They then face each other on hands and knees, each trying to get hold of his opponent. The favorite hold seems to be to grasp the opponent by the wrist with one hand and to get a head lock with the other arm. In the tussle the contestants rise to their feet in an effort to throw each other. If one contestant breaks the other's hold they part and repeat the performance until one is thrown on his back. This ends the contest. Throughout the match each side cheers its champion, and the winner is cheered by all. Brazilians who have wrestled with the Camayurá say that they are very strong and follow strict rules and never lose their tempers or take unfair advantage of their opponents. Young men gain prestige through wrestling just as older men gain prestige through shamanism and the performance of rituals.

An integral part of every public ceremonial is the feast. Large quantities of manioc flour is prepared, packed in leaf-lined burden baskets, and stored in an upright silolike structure on one side of the village plaza. This structure may be as high as 12 or 15 feet. Large quantities of fish are broiled on long babracots and left on the babracots to be shared later among the people. The prestige of the village is enhanced when there is an overabundance of food. There is certainly an element of conspicuous display and even waste in the way that the food is handled. Although the visiting tribesmen eat apart, the chief of the village distributes the food among them in a ceremonial manner. All visitors leave with gifts of food.

#### SHAMANISM

The art of sorcery and healing, the Camayurá say, was taught to the ancestors by the bemteví, a yellow-breasted flycatcher. He taught them how to grow tobacco and how to use it in shamanistic performances. Other birds, such as the jacobemba and the yapurí, are also shamans and, like the bemteví, are feared by the Camayurá, for they are believed to cause illness when angry. None of these birds are killed by them.

Illness, the Camayurá believe, is caused by the injection of foreign objects into the body by an enemy, and the art of healing consists in removing these objects known as *moan*, which may be small

pieces of charcoal, beeswax, or tobacco. The shaman, *payé*, is able to perform either of these acts. The Camayurá appear not to have the belief in soul loss as a cause of illness.

In the rite of sorcery, as in curing, tobacco plays a central role. Tobacco, *petím*, is believed to have a powerful *mama'é* of the same name, which can draw out or can inject pieces of itself, i. e., tobacco, into a human body. In addition to this inherent capacity, tobacco has the power to call the spirits, which then carry out the orders of the shaman.

The spirits which assist the shamans are known by the general name, *mama'é*, and, according to the Camayurá, are dwarflike, with white hair and black beards. These spirits differ from the *mama'é* of the rituals, who, as we saw, are not anthropomorphic in appearance, although tobacco can be used to bring one into contact with them as well. These anthropomorphic spirits do not appear to be ghosts of the dead, for the Camayurá say emphatically that they do not see the ghosts of dead people.

A man becomes a *payé*, shaman, during a serious illness. All men sooner or later become shamans although only a few become expert healers. When a young man becomes seriously ill, his father or some other old man initiates him. They smoke together until both fall into a trance. The father then draws out the object that caused the illness, and it is from the nature of the object that the father determines the *mama'é* of his son. When the young man gets in touch with his *mama'é*, he sees it and hears a chant that is the special property of that *mama'é*. By middle age most men have several *mama'é*. It must be mentioned here that the same process is involved in getting in touch with the *mama'é* of plants and of the sacred objects such as the *jakui* and the bull-roarer. A man has the right to impersonate a *mama'é* in any of the rituals only after he has made contact with it through a smoking ceremony.

Tamapú, the chief, claims that he has only one *mama'é* called *marakapú*, Jurúna has three whom he called *kurutai* (the small sacred flute), *marikurwá*, and *yaripué*. Although women and children have *mama'é* they do not see them. A sure way of finding out whether a man has been initiated is to offer him a cigarette. If he refuses to smoke it, it signifies that he is not initiated. One day when a middle-aged woman took one of my cigarettes I asked her if she were a *payé* and she nodded her

head. On investigating the matter I found that she was a Waurá woman. The Camayurá claim that their own women never become shamans, although very old women sometimes see their *mama'é*. They also state that a young man, during the burial of a shaman, sometimes sees the dead shaman's *mama'é* and hears its song. This *mama'é* then becomes his guardian and assistant. Such men are highly regarded by the Camayurá.

Simple cures appear to be performed solely with the aid of tobacco and its *mama'é* and are almost a daily occurrence in the village. One could always tell when a shaman was curing, for he made a characteristic grunting sound which could be heard at a considerable distance. I shall quote from my notebook a description of one of the first cures which I observed:

The one-eyed shaman was curing a small boy who was said to be suffering from pains in the head. The mother was seated in her hammock, holding the boy in her lap. The shaman squatted near the fire smoking his long cigar and inhaling deeply. Then he approached the hammock, blew tobacco smoke on the boy's forehead, wiped it several times with his hand and began sucking. He would draw in his breath with a loud wheezing sound and then exhale with a deep groan. After repeating this for about six times he went over to one of the house posts and squatted before it with his back turned to the people. He blew downward through his cupped hand making a noise like a horse neighing. As he exhaled he let saliva run out of his mouth and through his hand. After awhile the neighing sounds came faster and faster until a lot of saliva came out of his mouth. The shaman then wiped his hand on the house post and went back to the fire and after smoking for awhile repeated the performance. He did this four times.

In more serious cases of illness, in which sorcery is always suspected, a much more complex curing ceremony is required. Several shamans act together under the guidance of the one who has been asked to effect the cure. First they must avoid sexual intercourse for several days. Those who have had contact with a woman the night before take an emetic to purify themselves. Each shaman then puts on his necklace, *takupéá*, which is made from the wood of the plant whose roots provide the emetic. They then go into the woods at night, smoke, sing, and shake the sacred rattle, *yokaká*. They then begin to run around in the woods calling to one another. Eventually, one of the shamans captures a *mama'é*, wraps it in leaves, and they all return to the village to cure the sick



man. The imprisoned *mama'é* is placed next to the body of the man. The shamans all smoke and sing. The owner of the imprisoned *mama'é* then sucks a part of the sick man's body to remove the dangerous object. Next day the bundle is thrown into the river to release the *mama'é*.

One day Jurúna described his sickness and a cure in which a number of shamans participated.

I went fishing one morning and while I was busy fishing I suddenly felt a sting or bite in my side. When the sun was in the middle of the sky I began to shiver and I sent for Kantú, the Iwalapetí shaman. That night Kantú and six other shamans went into the woods and brought back a *mama'é*. They smoked and sang and the Iwalapetí shaman sucked out the *moan* [he later showed us the object, a sliver of burnt wood about an inch in length]. When I saw the *moan* I knew that it was the *mama'é* called *yarúp* which had caused it to enter my body and I also knew that this *mama'é* belonged to a Cuicúru. I paid the Iwalapetí shaman a necklace for curing me.

## THE LIFE CYCLE

### BIRTH (IMEMURUÁT)

The Camayurá recognize that sexual intercourse and the introduction of male semen into the womb is necessary to bring about pregnancy (*eheruá*). The word for semen (*irái*) is the same word as son. The word for womb is *iraimá*, which appears to be made up of the stems *irái*, sperm or son, and *ma*, place where anything dwells or grows; as for instance the word for deer, *capimá* (capim, grass, *ma*, lives or grows). The Camayurá appear to think of semen as the seed which when planted in a woman grows into a child. A man is thus considered the effective cause of birth and the creator of offspring. Men state that turtle eggs and piqui fruit are conducive to increased sexual intercourse and increase the chances of bringing about pregnancy.

Pregnancy is regarded with great satisfaction by both the husband and the wife and even more by their respective relatives. As we have seen in our discussion of the family, a marriage is not fully consummated until a child is born to a young couple. Although regarded with satisfaction, pregnancy is also considered a period of danger, for the fetus may be lost before maturity, the child may be stillborn, or may be born a cripple, or twins may be born.

During pregnancy both husband and wife observe certain food taboos. They avoid eating

large fish without scales and the flesh of turtles and turtle eggs. This restricts their diet to manioc products, small scaly fish, and piqui. These three basic foods, as we have already seen, are guarded by powerful *mama'é* that are believed to influence their reproduction and growth. It often happens that a young couple have to go without piqui and eat scaly fish only when they are caught. These food restrictions cause the young couple to loose weight and to appear emaciated and weak.

Birth takes places in the house near the prospective mother's fireplace. As no screens are erected, the act of birth is open to the public and anyone is at liberty to observe the act, including children. The prospective mother sits on a stool or a flat piece of wood and is assisted by an old woman experienced in these matters. The midwife squats behind the mother and presses her abdomen to assist delivery. The midwife severs the umbilical cord with her fingernail, ties it with cotton twine, and rubs ashes over the wound. The placenta is buried beneath the hammock of the mother. The mother then lies down in her hammock, and the child is wiped with buriti fibers dipped in water and is placed in the hammock with her.

During this performance the father is present and continues to remain in the house for a month or until the wife has her first menses after birth. During this period both continue to observe the food taboos and the husband avoids economic activities, the relatives supplying the needs of the couple.

After observing the birth of a boy, the writer returned 6 hours later to find the father blowing tobacco smoke over his son. The next morning the child was completely covered with urucú paint, with spots of jatobá resin over his chest and abdomen, cotton strings tied above the biceps and below the knees, and with a snail-shell necklace much too large for the tiny neck.

A few days after its birth the father and mother each give the child a name, each using the name which he or she has given. These two names will be used until a boy reaches the age of 7 or 8 when, after his ears are pierced, he will be given a new name by an older relative who performs the ear piercing. At puberty a boy receives a permanent name which has once belonged to an ancestor.

Girls continue to have two names until puberty, when they too receive an ancestral name. Until children are weaned the father avoids making bows, for it is believed to cause diarrhea in the children.

The birth of twins (*mokoinwát*) and cripples are considered a misfortune. If twins are born, all men and women in the village take an emetic and vomit. The father and mother continue vomiting for several days. The husband leaves his wife for a time, vomiting and fasting. He may even leave his wife permanently. It is believed that the *mama'é* are angry at the couple for sex misdemeanor or for breaking the food taboos.

Twins, like malformed children, are buried alive by the relatives of the couple. This is also done if an unmarried woman gives birth to a healthy child. One of the members of the Expedition related that he observed a bastard child being buried alive and how horrified he was to hear the infant crying even after it was covered with earth. Some days later I observed the woman lying in her hammock in the woods just outside the camp, where she had to remain for several days without food or attention near the grave of her child. The poor woman was still bleeding and paid no attention to the help which we tried to offer her.

Women practice abortion by drinking a medicine (*pirai'i*), made from the bark of a tree, and give as their reason the fact that as they have to nurse a child for 3 or 4 years they cannot have another child during this period. Even casual observation appears to substantiate this claim. If a woman conceives while nursing and abortion is not successful, the midwife will strangle the child.

The culturally determined practices of selection at birth at first might appear difficult to correlate with the unquestioned desire of the Camayurá for offspring. The Camayurá want offspring, and, as we have seen, will capture women and children in order to increase the numbers of their tribe. The demographic position of the Xingú tribes is a precarious one. Since 1887, there has been a great numerical decrease, whole tribes have disappeared, their remnants uniting with groups of the same linguistic stock. The killing of malformed children in a society where survival depends upon the economic efficiency of each individual is understandable, but the killing of twins and the spacing of children 3 or 4 years

apart is not so clear. Infant mortality is high and the families are small.

The widespread prevalence of abortion and infanticide among the Indian tribes of Mato Grosso is a matter which appears to require a thorough analysis by a medically trained person. It may well be that these customs rest upon a sound physiological basis. For instance, are the nature of the foods eaten and the prevalence of intestinal parasites such that a child has to depend upon its mother's milk for 3 or more years in order to survive? Are mothers unable to nurse twins successfully? What is the relation of the number of conceptions to the number of births?

#### THE CARE OF CHILDREN

For the first 3 or 4 years the child is practically attached to its mother's body. During the night it sleeps on the mother's body in the narrow hammock and during the day it is carried straddling the hip, held by the mother's arm. During this period the child suckles whenever it pleases and defecates and urinates without restrictions of any kind. On numerous occasions when I was speaking to a woman with a child on her hip the child would defecate, whereupon the woman would ask me to reach in a tree for leaves. After she had wiped her thigh and leg with the leaves, the conversation would continue. If the woman had a boy child we had to be careful to stand at some distance in order to avoid the stream of urine.

While nursing, the child would twist the nipple of the other breast and even when not nursing, a child would keep grasping the breasts and twisting the nipples. At no time was a mother observed restricting the movements or desires of a child-in-arms. With male babies the mothers paid particular attention to the penis, adjusting it so that it would not be squeezed while sitting on the hip.

There appeared to be no explicit attempt to teach a child to walk or to talk. In fact small children were discouraged from crawling about on the floor of the house. When not attached to their mothers, they were held by the father or some older child or were left to move around in the hammock. This lack of early movement is due in part at least to the fear of fire. As every woman had a small fire near her hammock, hot



ashes or embers covered a good part of the floor space of the house. It was also observed that mothers made every effort to prevent small children from picking up bits of food from the dirt floor and putting them in their mouths. Various insects like scorpions, spiders, and, above all, jiggers, are a threat to small children. A number of 4-year children were seen with their feet entirely covered with jiggers, which had caused infection. Bringing up babies under these conditions thus appears to be hazardous, and the long nursing period and the effort to keep the baby off the ground correlate with real dangers to its life.

Weaning and walking appear at about the same time. The first foods given a child are baked sweetpotato and boiled manioc gruel. Older children now assist the mother in guarding the child. It is washed in the morning and again in the evening. When it wishes to defecate it is taught to squat over a gourd vessel, although it is not punished if it accidentally defecates on the floor. When it is able to chew it is given such solid foods as *menyú* and broiled fish. In the course of these new activities it picks up the vocabulary associated with the objects, individuals, and events with which it comes in contact. From the age of 3 to 6 the child is treated with great consideration and kindness by the parents and the older children. It is permitted to observe and be present at all events, to sleep and eat when it wishes, and to move about the house and play at will under the watchful eye of the older people. But no special fondling or tenderness is showered upon it. I never observed older persons kissing, tickling, or fondling children with their mouths or hands as is commonly done among us.

Evidently the kindness and consideration shown to children is closely connected with the kinship relationships and the associated patterns of behavior. Among the Camayurá there was a 6-year-old boy who was an orphan, and as its mother had belonged to a foreign tribe the child had no classificatory mother. The boy was under the care of a woman related to the father. The behavior of this child was in marked contrast to the rest. He revealed his feeling of insecurity by showing fear. One day when a group of children were asked to take injections and submitted with an attitude of curiosity and with no show of pain, the orphan boy tried to flee, and when brought

back he cried, squirmed, and struggled to the extent that it was impossible to treat him. To attempts of kindness on our part he responded with moody, suspicious silence.

At the age of 6 years boys are given small bows and arrows with which they play from dawn to dusk. A game known as *warwá* is played by boys between the ages of 6 and 12 years in the plaza of the village. The game consists of two groups of boys standing about 100 feet apart, armed with bows and arrows. A boy in one group throws a small hoop toward the other group, and as it rolls along the ground each boy tries to shoot it. The one who strikes the hoop is cheered. He then picks up the hoop and throws it back toward the other group, who likewise try to shoot it. The hoop is made of grass wound with sipó vine and is about 8 or 10 inches in diameter. The harder it is thrown the more difficult it is to hit. Late afternoon appeared to be a popular time for this game.

Almost every morning when I went down to the river to wash I observed a number of boys below a tree shooting at birds no larger than a robin, and as birds sometimes fell dead from the tree their marksmanship was evidently good. From the age of 6 on, boys accompany the men on fishing trips, participating in the shooting of fish with bows and arrows, the younger boys shooting at small fish that are hidden in the weeds near the bank, the larger ones taking full part in the activities. Actually boys of 12 to 14 are considered the best marksmen. By the time boys reach the age of puberty they know the rudiments of all the major economic activities. They are not, of course, expert bow or canoe makers but they know how arrows and bows are made and assist their fathers in these activities. Thus, by observation, imitation, participation, and casual instruction, boys are gradually introduced into the economic activities of the tribe.

At the age of 8 or 9, girls begin to help their mothers in processing manioc, taking care of younger children, fetching water, and spinning cotton. In one family in which the mother had died, a 10-year-old girl managed all the household activities and took care of two younger children. Girls were not observed playing any special children's games. Both boys and girls accompany the men when they are clearing new fields and burning

the trees and undergrowth, or when their mothers go to dig up manioc roots and carry them to the village. Boys and girls also participate in secular dances, taking their places at the end of a line of dancers, imitating the adults to the best of their ability.

No sexual intimacies were observed between boys and girls. When asked about this matter the adults said children were too young for sex and that when they began to take interest in sex they were put into puberty seclusion. This statement is supported by the request which Tamapú made to the members of the Expedition when he left Nilo at the camp—that on no account could he have any relations with women. Actually girls and boys have little opportunity for secret meetings. When girls go to fetch water they go in groups accompanied by older women. In the village, girls are under the supervision of their mothers and other older persons. Children are warned specifically not to wander from the village because of the danger of being captured by enemy bands, and children speak with fear about the Shukaramái and the Suyá.

Although prevented from having sexual relations with girls, boys are not reprimanded against playing with their genitals, and such activities are looked upon with tolerant amusement by adults. When asked about onanism, boys would grin and snicker, talk among themselves, but would not give any straightforward answer.

While questioning grown-ups about sex matters and the names of sexual parts, men and women would discuss the subject freely in the presence of children. In other words, children seemed to know everything about sex, and no attempt was made to hide even the sexual act.

The freedom and ease which characterized the relations between grown-ups and children at no time affected the obedience and respect of the children toward their elders. Mothers particularly were seen to slap boys and girls if they shirked their duties. The respect of children toward men was particularly marked. On one occasion while we were taking a stroll on the airfield at sunset, followed as usual by a group of boys, one of them began mimicking the gait of a very stout Brazilian Air Force officer who had visited the camp some days previously. One of the men said the officer

in question was Fernando's father, which of course was not true, but immediately the boys stopped, turned around, and went back to camp, and even the next day they appeared shy and uncertain of our reaction.

Of all the children observed in Jacarei Camp, those of the Waurá appeared to be the most energetic. When a group of Waurá boys entered the main building they would first ask for some sugar, then they would examine anything new, even to examining one's pockets. Then they would look through magazines and newspapers. After everything in the house had exhausted their interest, they would stand around stamping out a dance rhythm with their right foot. Suddenly they would form a line and go dashing around the central table, stamping out a furious dance step. This would continue until they were told to go outside and play.

At no time were children observed quarreling or fighting, even when children of other tribes were present at camp. If one child injured another accidentally he might be punished if the injury was due to carelessness. It was remarkable how few accidents took place among boys who played with bows and arrows all day. Only once did the writer see a boy shoot another accidentally. In this case the boy was punished, for he used a sharp-pointed arrow which struck the other in the foot. Lack of accidents is no doubt due to the fact that boys use the whistling arrows, which not only give a warning but have a round tucum nut shell at the point.

At the age of 8 or 9 the chief pierces the ear lobes of the boys. This is done with a fang of the dogfish, and the act of piercing the ears is known as *hakutúk*. After the ear-piercing act the parents of the boys give a ceremony during which food is passed out among the guests and the *okutúk* dance is performed. The boys now receive a new name which is used by everyone. Generally a number of boys go through the ceremony together. Small wooden plugs are kept in the hole until they heal, after which feather pendants can be worn. Boys and even young men like to wear empty 22-caliber rifle shells in their ears. No similar ceremony is performed over girls.



## PUBERTY SECLUSION (AKIPEWÁT)

From what has been said we can conclude that child rearing is largely an informal process, during which the child learns everyday activities through participation. By the age of puberty children know how to perform all but the specialized tasks and have observed practically all the overt activities and physiological acts, from sexual intercourse through birth to death and burial. As we have noted, childhood is normally a period of freedom and ease, and children appear to be happy, friendly, and satisfied.

During puberty girls and boys enter upon a short period of rigorous discipline and training. They now learn to understand those things which are not observed in daily life. The girls are taught how to act during pregnancy, what medicines to prepare for abortion, how to behave toward their future husbands, and how to live a respected life in the village. Boys are taught the origin myths and stories of the doings of important men in the past, how to act in a raid, how to play the flutes, how to make bows and arrows of the best quality, and something, although by no means all, about the religious beliefs and ritual practices. The boy and the girl come to realize that life is a serious business, with hazards and pains, and that the spirits are intimately involved in the affairs of the tribesmen. In the case of boys, they learn to stand pain without flinching and to realize the importance of continence.

When a girl has her first menses she is secluded behind a reed screen near her mother's hammock, where she must remain during daylight. She must not speak or call out to anyone, and if spoken to she must answer in a low voice with downcast eyes. Her mother supplies her with food and gives her tasks to perform, such as spinning cotton or burití fiber. Whenever the mother or an older woman has time she sits in the enclosure with her and talks to her. The girl must stay in seclusion for 3 or 4 months or long enough to allow her hair to grow over her eyes. It is believed that the longer the girl remains in seclusion the better wife she will make. She arises before sunrise and, if possible unobserved, performs her physiological acts, bathes with water supplied by her mother, and then retires behind

the screen. She comes out again for awhile after sunset.

When a boy reaches the age of 14 or 15 he, too, is secluded behind a reed screen. The Camayurá are not very definite about the age, saying only that when a boy begins to become interested in girls he is secluded. Like the girl, he is allowed to come out only before sunrise and after sunset and must talk in a low voice and only when spoken to. Like the girl, he is kept busy with various tasks and is instructed by his father and other old men. I spent several hours off and on behind the screen with Nilo. He was always painted with urucú and wore featherwork ear pendants. The place was littered with materials for making arrows and ornaments and a small fire burned on the floor. He was always busy making arrows, ornaments, repairing old flutes, carving seats, and weaving baskets. After dark we could hear him practicing on the flutes under the instruction of an older man. Usually his 10-year-old sister was behind the screen with him, going out once in a while to bring him food, water, or materials that he needed. In contrast to a girl, a boy may go through several seclusion periods before he is considered mature. This was Nilo's fourth period. It seems that so long as a boy does not have sexual intercourse he can be put back into seclusion for any misdemeanor or any act which his father considers a sign of immaturity. Boys, particularly, object to the restrictions of seclusion. In the evenings while we were at Tuatuari, Nilo would sometimes sneak out back of the houses to visit us. But as soon as some grown-up would approach he would run back. We were told that it was difficult to keep boys in seclusion and that some fathers were lax in enforcing the puberty regulations.

We might say, therefore, that the special treatment accorded young individuals during puberty seclusion constituted the final phases of the process of socialization and enculturation. It seems incorrect, at least among the Camayurá, to think of this state as a rite or ceremony of passage alone. It appears to be more a period of training and education in which the young are brought into contact with the belief system of the tribe, and during which they are taught the meaning of the belief in spirits and their power over man, the meaning of tribal religious rites, and the sacred

objects used in these rites. The fact that the period of seclusion was not a specified number of months but depended upon the development of the young person appears to indicate that the educational aspect is of primary importance. Camayurá society is not a differentiated society. There are no occupational, warrior, ceremonial, or shaman classes which a man could join through special training and initiation. Every man participates fully in economic activities, is a warrior if need be, is his own shaman, and a dancer in the tribal rituals. Obviously some are more expert than others, some become specialists in economic crafts, and some become flute players and skilled shamans. But every man is taught the rudiments of these skills and during his first illness a man is taught, through the smoking of tobacco, how he can get in touch with the *mama'é*. When a young man or woman comes out of puberty seclusion he or she is a mature individual equipped with the knowledge, beliefs, and values that his culture provides.

Important in the orientation of a man to the Camayurá world is the proper exercise of sex and the attitude toward pain. Continence is prescribed before important undertakings because it is believed that the *mama'é*, upon whose good will success depends, are angered by sex, for they do not like the smell of men who have had sexual relations. If a shaman, who has had sexual relations the night before, is suddenly called upon to perform, he will take an emetic to purify himself. Vomiting, as we have seen, is a recognized way of ridding one of evil or uncleanness. Wrestlers and dancers, too, avoid sex for some days before putting on a performance.

As the pleasures of sex must be enjoyed with caution and proper regard to the attitude of the spirits, so pain must be endured unflinchingly. We have noted that scarification is sometimes inflicted upon older children as a form of punishment. To even the threat of scarification boys respond with overt signs of fear. But at puberty both boys and girls are subjected to repeated scarifications with the *yayáp*, scraper, until they can endure the pain without flinching. Tamapú refused to let me take a photograph while he was scarifying Nilo because Nilo could not yet endure it without showing pain. Thus, scarification and the avoidance of sexual relations go hand in hand.

To be successful, to be a man in the Camayurá pattern, pleasure must be restricted and pain endured.

#### MARRIAGE (APITAHÓK)

When young men and women come out of puberty seclusion they are given new names by which they will be addressed for the remainder of their lives. They are now told to spit if they accidentally mention the names of their future in-laws. If they wish to refer to a person whose name they cannot use they must say the child of or father of so-and-so.

Marriage rules prescribe that one must marry a cross-cousin. Long before the children are mature the parents have arranged the marriages and the young people know who their future spouses are. All these arrangements, of course, depend upon the availability of young men and women in the right kinship categories.

When referring to marriage the Camayurá use the term *apitahók* which contains the words *apí*, mother's brother, and *hok*, house, and which appears to mean no more than to-go-to-the-mother's-brother's-house. Genuine Camayurá marriages, that is, marriages not involving capture or marriage outside the tribe, are solemnized during the *kwarúp* ceremony. The young people come out of puberty seclusion during this ceremony, and the young man cuts the hair of his future wife and the young woman tonsures her future husband. This act, publicly performed, unites them in marriage.

After the marriage ceremony the young husband goes to live in the house of his father-in-law. As has been pointed out before, until a child is born the marriage is considered temporary. Once a child is born, however, and all concerned are satisfied with the marriage, the husband takes his wife and child to his father's house. He is now a mature man with all the rights and responsibilities of a tribesman.

A model young man is polite and respectful to his wife's family, friendly and cooperative toward his brothers, and obedient to the decisions reached by the chief and the older men. Skill in fishing, farming, and the crafts bring him the respect and admiration of his fellows, but prestige and renown are gained through wrestling. All young men undergo training in wrestling, and out of these



contests a group of outstanding wrestlers are selected who are to uphold the honor of the tribe during the intertribal ceremonies. To be an intertribal champion is the ambition of every young man, and to have once been an intertribal champion is a mark of distinction that lasts throughout a man's lifetime. Of importance, too, is the skill which a man displays in throwing spears with the spear thrower during the *yawarí* or in dodging the spears thrown by others. In gaining renown through feats of strength and skill a man is careful to observe the rules of continence, dietary regulations, and to inure himself to pain by scarification, all of which are believed to increase his strength.

A woman, too, gains respect by bringing up a number of healthy children, by being industrious, and by not having sexual relations with her husband's brothers. Quarrels and disagreements between husband and wife are usually blamed on the wife. Young women paint themselves and behave in a manner to be attractive to the men. It was amusing to observe how a naked woman after painting herself moved about with grace. She would sit down slowly on one leg, moving the other thigh over to cover her pubis, and place one hand on the ground to support herself while the other rested on her thigh; then she would straighten her back and look over herself, just as one of our women do after putting on a new dress. She would then glance around to see if people were looking at her, just as if to appraise their attitude toward her.

Every man as he grows older is expected to become a *payé*, shaman. Although every young man learns about the existence of the spirit world during puberty seclusion, he is not expected to have an experience in which he gets into contact with the *mama'é* until he becomes seriously ill. During his first illness his father or other older man who has already had experiences initiates him. They smoke together and when the father has drawn out the object which caused the illness, he can determine by this object just which *mama'é* will become the younger man's protecting spirit. They then continue smoking until the young man is able to see the *mama'é* and to hear its song. The smoking ceremony may have to be repeated many times before the young man succeeds in seeing and hearing his *mama'é*. Once he has had this experi-

ence and can chant the song, he is considered a shaman and thereafter can smoke in public.

The earlier a man gets into contact with the spirits, the better shaman he is expected to become. Some young men are said to have seen the *mama'é* without being ill or before they have smoked. This experience usually takes place during burial, and the young man sees and hears the spirits around the corpse of the dead. Such a man is highly respected and usually becomes an outstanding shaman. On the other hand, some men reach old age before they have this experience. The general attitude appeared to be one of waiting. When one began to have spells of illness, then one would sooner or later have a shamanistic experience.

A famous shaman is a man who gets into contact with many spirits, is able to call them at will by smoking, and can cure others with the help of his spirits. Only men who have come into contact with the *mama'é* that guard the important food plants and fish can dance and sing the songs of these *mama'é* during rituals. The perpetuation of the tribe, the growth of food plants and fish, and curing of the sick thus depend upon men who get into contact with the *mama'é* and can solicit their help in maintaining the life of the tribe. Great shamans are the protectors of the tribe and are accorded great respect. When asked about the outstanding men in the tribe, the Camayurá would point to men who had been great wrestlers in their youth, who had distinguished themselves in raids, and who now had become great shamans and ritual performers. These men always had a greater number of *mama'é* than the others.

#### BURIAL (OMONÓ)

Although the Camayurá recognize that men may die at the hands of human enemies from other tribes, and other accidents, as well as from the effects of sorcery, they still believe that death is always due to the anger of the *mama'é* who have forsaken them or who have neglected to help them. Death, *manó*, is thus a condition of evil from which the immediate relatives must be saved.

After a mature person has died, the body is washed, and painted with urucú and genipapo, the ornaments are put on, and then the corpse is sewn up in a hammock and buried in the plaza of the village. The form of burial depends upon the

status of the individual. Common tribesmen, that is, those who are not of pure Camayurá descent, are laid horizontally in the bottom of the grave and then covered. The mature children of chiefs are buried in a sitting position. Men of pure Camayurá descent are buried in a vertical or standing position. The body is wrapped in a hammock, a pot is placed over the head, and then the corpse is strapped to an upright post of *camiuva* wood, placed in the grave, and covered. Outstanding chiefs are given a special burial. After a deep grave has been dug, a compartment is hollowed out on one side, two posts are driven in, and the corpse, wrapped in a hammock, is slung from the posts so that it does not touch the ground. The grave is then filled so that the corpse rests in a small compartment. Graves are generally marked out with a circle of short posts until the *kwarúp* rites, after which they are removed. It is of interest to note that the Camayurá term for grave is *ivirahók*. *Ivirát*, as we have seen, is the term for one of the three manioc *mam'é*, to which the word *hok*, house, has been added. The word "grave" thus appears to indicate manioc-

spirit-house. After death the ghost goes to the abode of the dead, *karakapí*, where the ancestors dwell. The Camayurá have no fear of the dead, for they believe that ghosts never return to haunt the living.

After death the immediate relatives of the dead cut their hair, scarify their heads and arms, and wail in a loud voice and try to jump into the grave, but are prevented from doing this by the villagers. The mourning period lasts until the next *kwarúp*. The mourners are secluded behind a screen in the house and are not permitted to fish or to work in the fields. They can be heard behind the screen chanting songs in the morning and in the evening. During the period of mourning the name of the dead person cannot be used. The relatives of the dead person are released from mourning seclusion in the *kwarúp* rites at which time the chief appoints a woman to wash the heads of the mourners with water. When children under the age of puberty die the parents do not have to wait until the *kwarúp*, but are released from mourning sometime later by having their heads washed.



## THE BACAIRÍ

This brief account of the Bacairí is based on field work done among the Bacairí living in the Government Indian Post on the Rio Paranatinga in June 1947. The field work was carried out in the course of a reconnaissance survey which the writer was then making of some of the central and northern Indian tribes of Mato Grosso. This and other trips at the time were made in a Ford truck put at the disposal of the writer by the Serviço de Proteção aos Índios. By using a truck the trip to the Paranatinga could be made over the Planalto do Matogrosense in 2 days in contrast to the old route along the Rio Cuiabá which, on horseback with pack oxen, takes from 2 to 3 weeks. The writer was accompanied by Fernando Altenfelder Silva of the Escola de Sociologia e Política de São Paulo and by Rev. Thomas Young and Rev. W. L. Buckman of the South American Indian Mission. The Reverend Mr. Young, who has spent more than 10 years among the Bacairí, was of great help in selecting informants and in adding to our knowledge of the Bacairí.

According to estimates made in 1947 by the Brazilian Indian Service (Serviço de Proteção aos Índios) there are between 200 and 250 Bacairí living in the northern part of Mato Grosso State, Brazil, divided between the Indian Post of Simão Lopes on the Rio Paranatinga and the village of Rio Novo some distance to the northwest. The Bacairí claim that the whole tribe originally lived together on the Rio Paranatinga (headwaters of the Tapajoz River), but attacks by other Indians and Brazilians forced them to move about 90 years ago. Owing to a dispute the tribe split, one group moving north to settle on the banks of the Rio Kuliseu, a tributary of the Xingú River, the other moving to Rio Novo. After about 50 years in the Kuliseu Basin, this group moved to the present location of Simão Lopes, not far from the original Bacairí settlement on the Rio Paranatinga. Although the Rio Novo group has adopted Brazilian customs and manages without Government help, some have moved to Simão Lopes where the Bacairí now live on reservation lands and receive assistance from the

Brazilian Government. The information presented here was obtained at Simão Lopes from the Bacairí who lived on the Rio Kuliseu and relates to the life that they lived there about 40 years ago.

Linguistically the Bacairí belong to the Carib-speaking family and appear to be closely related culturally to the other Carib-speaking tribes in the Upper Xingú Basin. The Bacairí are short in stature, broad-shouldered and well-built. The head is broad, the nose straight or aquiline, the face narrow, the lips fairly thin. In physical appearance the Bacairí remind one of the Arawak-speaking Paressí, but contrast sharply with the large-framed, coarse-featured Bororo, Umotina, and Guató living in the headwaters of the Paraguay River to the south.

The Bacairí Indians are first mentioned by Gonçalves da Fonseca in his account of his travels to the Madeira region in 1749. In the atlas of Thomas Jeffry, 1776, the "Bacahyris" are located on the Rio Paranatinga. Ayres de Casal, in 1817, refers to the "Baccahyris" as living in the region around the Rio das Mortes. Martins places them in the headwaters of the Xingú. From 1820 on, more or less permanent contact has been maintained with the Bacairí living on the Rio Novo and Rio Paranatinga. In 1820 a P. Lopez led an expedition in search for gold into the area and with him came priests who began to convert the Bacairí to Christianity. With these contacts came disease and conflicts (Von den Steinen, 1942, p. 123).

The first scientific account of the Bacairí dates from the voyage of Von den Steinen down the Xingú River in 1884. Traveling over land from Cuiabá, he and his party reached the Christianized Bacairí living in the villages of Rio Novo and Paranatinga with whose help he continued his voyage down the Batoví River where he was the first to make contact with the four pagan villages of the Bacairí located between latitudes 13°30' and 12°30' S.

The following table gives size and number of inhabitants of the villages visited by Von den Steinen (1942, appendix, table 8, p. 418):

	Houses	Men	Women	Children	Total
Rio Novo-----	6	16	19	20	55
Paranatinga-----	7	6	8	3	17
On Rio Batoví:					
First village-----	3	10	7	9	26
Second village-----	4	18	17	7	42
Third village-----	3	13	12	19	44
Fourth village-----	7	27	18	8	53
Total-----	30	90	81	66	237

By the time Max Schmidt visited the Bacairí in 1900-1901, the Bacairí settlement had diminished. On the Paranatinga he met 34 Bacairí and at Rio Novo, 60. On the Kuliseu River where Von den Steinen had visited four villages, Max Schmidt was able to find only two.

## ECONOMY

### SHELTER

While in the Xingú watershed the Bacairí lived in villages built on the banks of the Rio Kuliseu. A village (*utanári*) consisted of three to eight houses (*towisé*) built in a circle around a central plaza, *taséra*. The Bacairí house was a large communal building, oblong in shape, with rounded ends and with the roof thatching reaching to the ground. These large domelike buildings were occupied by three to five families.

In the center of every village there was a ceremonial or flute house (*kadoéti*) in which the men kept their ornaments and musical instruments and in which visitors were entertained. Men, women, and children are permitted to enter the *kadoéti*. Attached to the common house there was a smaller building, usually oriented in the direction of the rising sun, in which the sacred flutes were kept. Women were not permitted to enter this house, as they were not allowed to see the sacred flutes. The villages were connected by roads running along the river bank.

### EQUIPMENT

In the center of each house there was a storage space (*jiráu*) where maize, manioc meal, and other foods were kept in gourd vessels (*káiko*). Cooking was done in a small shed at the back of the house, but food was eaten indoors. Around the walls each family had its hammocks (*amáka*) in which the people slept. Other furnishings of the house consisted of mats, baskets, clay pots,

wooden benches, and dishes and cups made from gourds.

As the Bacairí were extensive travelers and depended upon fish for a considerable part of their food supply, canoes were an important part of their equipment. The Bacairí canoe (*pépi*) was made from the bark of the jatobá tree. The tough, heavy bark was first stripped from one-half of the tree. Small fires were then lighted on the inside of the bark trough to make it curl. Braces were placed at intervals along the entire length, the bow was tapered, and the stern was squared off by forcing the bark upward at one end. Bacairí canoes varied in size, the larger ones being able to carry as many as 8 men. Canoes of jatobá bark are used by the Bacairí today and are the predominant type among the Indians of the Upper Xingú. The Bacairí also made large tubs out of jatobá bark which were used as settling vessels for manioc juice. The juice of the manioc contains a fine powder or starch which settles on the bottom of the vessel, to be gathered after the liquid is poured off. For gardening, the Bacairí formerly used a digging stick made of hardwood. For hunting, they used a bow (*túka*), round or slightly oval in cross section and from 2 to 2½ meters in length, made from a yellow or reddish wood which was first matured by burying it in mud. The bowstring was made from the fibers of imbauba bark. Arrows (*piréu*) were made from cane with hardwood or bone points. Hunting arrows had two feathers, but arrows used for shooting fish had serrated wooden points and no feathers. The cutting tools of the Bacairí consisted of knives made from bamboo, stone, bones, and shell. Transportation was by canoe, or if over land, goods were carried in a wicker basket supported on the back by a tump line.

### ORNAMENTS

While living on the banks of the Kuliseu River, the Bacairí, in common with the other Upper Xingú River tribes, did not use clothing. Men sometimes wore a narrow cotton band (*onegín*) around the waist, with a few tassels hanging in front. Women, after puberty, wore the ulurí. Men wore their hair cut short. Women wore their hair long at the back but cut straight across over the forehead. Hair was cut with a knife made by setting sharp fish teeth into a wooden stick,



and was combed with a comb (*aekáji*) made by weaving slender cane teeth into a cotton holder.

Although clothing, in the strict sense of the term, was nonexistent, the Bacairí used, on ceremonial occasions, beautiful, skillfully made ornaments. An important ornament was the *orógo*, a diadem or feather headdress strapped to the forehead. The *orógo* was made by fastening a row of green parrot feathers to a cotton band, above which was fastened another row of yellow weaver bird feathers. Two long blue macaw feathers were set in the center so as to stand straight up above the forehead. The *orógo* was worn only by men. These headdresses are still used, for some were seen in the village of Simão Lopes.

There were at least four kinds of necklaces. The *megesáwua* was made from small thin round disks of white or pink snail shell, as many as 400 being strung on a string. This necklace was worn around the neck by women and around the waist by men and girls. The *ikwihéno* was also made from snail shell, but the disks were oblong with holes in both ends through which strings were passed. Although the *ikwihéno* was particularly used by men, women sometimes wore it together with the *megesáwua*. The *sawalápi* was a necklace made from black disks of tucum palm nut and could be worn by both men and women at all times. Both men and women also wore necklaces made from the teeth or claws of the jaguar called the *dodojéri*. The Bacairí still use the *megesáwua*, *ikwihéno*, and the *sawalápi*.

Besides necklaces, the Bacairí used a variety of other ornaments. The *upawwí* were armlets and anklets of cotton material decorated with feathers of different colors. The armlets, which were about 2 inches wide, were fastened tightly above the biceps and were believed necessary for the development of the muscle, with similar bands worn below the knee and around the ankles. Both men and women used the bands. An American missionary who experimented with Bacairí arm bands claimed that they caused him a great deal of distress but he has observed no ill effects among the Indians. The *pai* was a feather ear ornament made from red toucan and yellow parrot feathers suspended from the lobes of the ears. Holes in the ears were made with a sharpened jaguar bone or with a sharpened rhea feather. The *tajikaino*, worn only by men, consisted of two blue macaw feathers

placed in a hole in the septum of the nose, so that the feathers swung one on each side of the head. Although the *páiko*, or scratcher, was not strictly an ornament, it is mentioned here because it had ritual meaning. The *páiko* was made by setting fish teeth into a gourd holder and was used for scarifying the skin of the arms, legs, chest, and back so as to cause bleeding. The wounds were first washed with water and later smeared with the juice of the *mukúna* vine. The *páiko* was used by boys and girls during puberty seclusion and by adults who had sores on their bodies. It was believed that the use of the *páiko* made people strong and healthy. As far as could be ascertained the Bacairí did not mutilate the teeth, genitals, or other parts of the body. There was no sign of tattooing, but pubic hair was carefully pulled out by both men and women. Formerly the Bacairí kept large birds, believed to belong to the eagle family, in their villages for their feathers. The Brazilians call the bird "harpía" and claim that it is still kept by the Indians in the Xingú Basin. The "harpía" was captured by shooting it with a blunted arrow, and it was kept in a special hut and fed. Villages often had several of these birds in captivity, the feathers being used particularly for feathering arrows. Parrots and macaws were also kept, their feathers being used only for ceremonial decorations.

#### SUBSISTENCE ACTIVITIES

Vegetable foods formed the basis of Bacairí diet, with fish and meat taking second and third places. The principal animals hunted were monkeys, deer, wild pigs, tapir, and the jaguar. The jaguar, however, was not eaten, but was hunted for its skin, teeth, and claws. The principal weapon used was the bow and arrow. Hunters would stalk game alone or in groups with the aid of dogs driving game into water or into steep rocky enclosures. There is no mention of the spear being used, but deadfalls and pitfalls were used. Many varieties of large fish were shot with the bow and arrow, either from canoes or from the river bank. Lizards, turtles, and a wide variety of wild fruits, roots, tender shoots, and honey were collected at certain seasons of the year.

The major part of the food supply, however, was obtained through agriculture. The Bacairí cultivated bitter manioc, *ópa*; sweet manioc, *taisê*;

beans, *ipié*; peanuts, *oremí*; sweetpotatoes, *mahódo*; "cará," *ndvi*; maize, *ánji*; potatoes, *múla*; cotton, *kodokíra*; urucú, *áunto*; tobacco, *tauwí*; piqui fruit, *ípa*. Manioc, maize, and sweetpotatoes were the principal food crops. Cotton was grown for making hammocks and the various belts and strings used. Tobacco leaves, after being dried, were smoked by being rolled into cigars (*tapáki*). Tobacco seems to have had a ritual use, as the shamans smoked heavily before performing a rite. Bitter manioc was shredded on a shredding board into which fish teeth or fine pieces of shell had been embedded. The pulp was squeezed in a piece of cotton cloth in order to remove the poisonous acids. The meal was then used for baking cakes. The fine powder or flour which settled at the bottom of the settling tub was also used for baking cakes after it was thoroughly dried. Maize was eaten boiled or roasted. Sweetpotatoes were roasted over coals. Maize meal was prepared and mixed with wild honey and water to make a non-alcoholic beverage. The Bacairí claim not to have used any form of alcoholic beverage.

Cultivated plots were located outside the village, each large household usually having a continuous area. Maize and many other crops were planted in September and October when the rains began. Sweet manioc and sweetpotatoes could be planted the year around, especially on river banks after the rivers went down following the rainy season. April was the harvest month and also the beginning of the ceremonial season.

#### ORGANIZATION OF LABOR

The occupants of the large communal houses usually worked together in the fields, went hunting or fishing together, and generally cooperated in economic activities. Families could work individually if they wished or did not need the help of others. It was the task of the men to burn and prepare the fields for planting. As the men loosened the soil with the digging stick women planted the seeds, slips, or pieces of stalk, as the case might be. Women and children thereafter took care of the weeding.

Division of labor by sex existed to a certain extent. Women wove mats (*anegéu*) out of various fibers, and hammocks out of cotton yarn which was also spun by women. Men wove baskets. Both men and women made clay pots. Bacairí

pots are quite distinct from the pottery of the Indians living on the Upper Paraguay River. Bacairí pots are flat-bottomed and have straight vertical walls with everted rims. The pots in common use were, and still are, black in color, unglazed, and undecorated. Some of the pots seen were made in the forms of frogs, turtles, fish, and birds. The Bacairí claim that they formerly had decorated pottery called *amúga*, painted with black, gray, red, and brown designs.

The Bacairí also had economic activities in which the whole village, or a number of communal houses, participated. The *kometé*, or collective land clearing, was one of these. A man would invite a large number of relatives and friends to assist him in clearing a new piece of forest land. The women would participate by preparing large amounts of food and honey beverage for the workers. The new field would remain the property of the man who initiated the *kometé*, obligating him to work in return if called upon, but sometimes the group of men who cleared the field would divide it among them.

House building was always an enterprise in which the whole village took part. The group that was interested in raising the house cut the beams and poles necessary for the framework and prepared large quantities of food. While a certain number of men began to put up the framework, others went to gather grass for thatching. When they returned with the thatching they put on their ceremonial decorations and danced the *mahulawári* dance. House building was thus not only an economic act but also a ceremonial occasion.

Hammock weaving was, at times, a collective enterprise. A woman with a larger than usual cotton crop distributed cotton among her friends and when the work was completed she organized a feast and dance.

Ceremonial trading expeditions (*tulíki*) were organized by the chief of the village. During the rainy seasons, when the rivers were high and canoe travel easy, the men of a village would collect whatever excess goods they had, such as bows, baskets, ornaments, hammocks, and even food, and would go to a neighboring village where the chief would receive them before the ceremonial house. The two chiefs would then supervise the exchange of commodities. After the trading was



over the chiefs organized wrestling matches between teams of the two villages. Before the visitors left, a feast (*tuláki*, swallow feast) was given in their honor. The motives for these trading expeditions were both economic and ceremonial. They were organized by a chief when the villagers actually required certain economic goods, but even when there was no economic need, goods were exchanged and the men of the two villages participated in wrestling, dancing, and feasting.

### SOCIAL ORGANIZATION

The Bacairí claim not to have been a warlike people. They defended themselves if attacked, but say that they did not attack others. Each village had a chief (*píma*) who was assisted by an *itáida*. There was no chief for the whole tribe. The *itáida*, who was a young man, was selected by the chief with the consent of the villagers. The *itáida* could be the son of the chief but this is not a requirement, for any able young man was eligible for this position. At the death of the chief the *itáida* succeeded him.

The principal functions of the chief were economic, judicial, and ceremonial. As we have seen, the chief organized trading expeditions and participated in such activities as collective planting and house building. He also represented the people of his village when visitors arrived or when his own village made formal visits. If the village feared attack the *píma* selected a particularly brave man to lead the defense or to undertake retaliation. Discussions concerning disputes and other village affairs took place in the ceremonial house. Murderers were exiled or if a war was on the murderer was made to bear the brunt of the attack. Thieves, adulterers, and others who persisted in disturbing the peace and harmony of the village were exiled through the common action of the villagers. Exile was considered severe punishment, for the Bacairí say that individuals who were exiled often committed suicide. Chiefs among the Bacairí, therefore, were not war leaders, nor was succession governed by descent. Chiefs seem, thus, to have been primarily leaders of social activities. The part which a chief played in ceremonial life will be described later.

There appears to be no evidence that the Bacairí had clans or moieties. The kinship nomenclature is of the bifurcate merging type with parallel kin merged with lineal kin and with separate terms for mother's brother and father's sister and for cross cousins. (See chart 3.) The kinship terms in ego's generation and in the children's generation are distinct for men and women. Beyond the bar prohibiting marriage between anyone called brother, sister, parent, or child, there were no special rules governing marriage. Cross-cousin marriage was common but not preferred. There were no residence rules or avoidances of the mother-in-law or father-in-law. As the Bacairí lived in large communal houses, marriages often took place between young people brought up in the same house. After marriage they would take over a section of the house as their private quarters. The Bacairí say that families could move to another house with the consent of the house elder. Although polygyny was permissible marriages were generally monogamous. The father and the father's brother had great authority and were highly respected. Younger brothers were not permitted to joke or play rough with their eldest brother. The mother's brother and father's sister were also respected but less than the eldest brother. The relationship between brothers and sisters was one of great respect, the informant saying that incest was unthinkable.

### THE LIFE CYCLE

#### BIRTH (ERASÉLLI)

Pregnancy (*enokúa*) was recognized as being caused by sexual intercourse. In advanced pregnancy a woman was not permitted to eat the flesh of such large animals as deer, capybara, or tapir. When the time of delivery drew near a portion of the house was screened off, where the woman gave birth and remained secluded until the normal menses began. The expectant mother was assisted by her mother and other female relatives, a shaman being called only in cases of difficult birth.

A woman gave birth in a squatting position, the midwife holding her under the arms and gently pressing her stomach. Sometimes the stomach and back of the woman were bathed with poultices made from boiled cotton leaves. It was the duty of the woman's mother to cut the umbilical cord

with a bamboo sliver. The placenta was wrapped in a piece of cotton cloth and buried because it was believed that if it were picked at by birds it would cause sickness and misfortune to the mother and child. The child was then washed, wrapped, and given to the mother. Later it was given the name of one of its ancestors.

During the seclusion period the mother and child were believed to be in a state of ritual danger (*wanki*). They were not permitted to go out in daylight and had to be fed and cared for by the female relatives. The first menses released the mother and child from seclusion, this release being known as *tadaunúto*. Shortly afterward the father invited the villagers to a ceremony (*itabienli*) during which the *nokigóra* and *tadánwa* flutes were played and only the women danced. By means of this ceremony the mother was reintegrated into the life of the family and the village.

After 3 years of age both boys and girls began to copy their elders, the boys playing with bows and arrows and the girls with spindles. By the time the boys and girls reached puberty they knew how to perform most adult activities.

#### PUBERTY RITES

When the girls had their first menses and the boys reached the age of 13 or 14, they had to go into seclusion (*posegéiro*) for a period of 2 months to a year. It was believed that the longer the young people stayed in seclusion the stronger they would become physically. The longer periods of seclusion were also believed to enhance the prestige of the family. The boys and girls were not permitted to come out in daylight, and were fed and cared for by their parents. While the boys and girls were in seclusion they made pots and baskets for family use.

With boys the seclusion was inaugurated by an ear-piercing ceremony. A number of men with sons of about the same age would perform this rite collectively before invited guests. After eating and drinking, the *poinwáto* song and dance were performed. The boys were now in a state of *wánki*, ritual danger, and were secluded immediately after this rite. The girls' ears were pierced when they were babies, but the ear piercing of the boys corresponded to the period of the first menses of the girls.

The release from seclusion was signalized by the feast of *tadaunúto*. The parents of the young people accumulated much food and went on a big hunt on the day before the feast. The chief and all the villagers were invited to the ceremony during which all the Bacairí songs and dances were performed and the young people were presented gifts by the villagers. The girls would now take the strings of beads from around their waists and wear them around their necks and their mothers would give them cotton cords which they put around their hips and to which the *ulurí* were attached. The boys and girls were now eligible for marriage.

#### MARRIAGE (TODOHOKÚINLE)

Marriages were arranged by parents or by older brothers or sisters. The father and mother of the boy, for instance, would take presents of ornaments and food to the parents of the girl. If the parents of the girl accepted the gifts it meant that they favored the marriage, and if they refused it meant that the suitor was not acceptable. The marriage ceremony took place in the girl's home, the date being arranged by the parents. At the girl's house the young couple were seated side by side with linked arms. They were then given advice by their respective parents and relatives. Marriage was not considered a period of ritual danger, nor were extensive feasts given. It appears to have been an affair involving only the families of the young couple.

#### BURIAL (EPIODÍLE)

The body was painted, ornaments were put on, and then the body was wrapped in a hammock and buried in a grave with the feet to the east so that the face would be toward the rising sun. Although old and worn objects were burnt, most of the property of the dead was shared among the relatives. The part of the house occupied by the dead person was washed, and clean sand was sprinkled on the floor. There was a mourning period (*logúno*) of 1 month, during which the immediate relatives were in a state of *wánki*.

#### SHAMANISM

When a person died, the ghost (*kadópe*) went into the sky or into the water or sometimes wandered upon the earth. Ghosts of the dead often



came back to the village to play tricks on people. The Bacairí did not believe that the ghosts of the dead caused death and, therefore, were not afraid of them. They were, however, afraid of certain evil spirits—for instance, *eradupíra*, who caused death and sickness.

To become a shaman (*piáji*), a young unmarried man would train with an old shaman for a period of 6 months to a year. During this period sexual intercourse was forbidden, fasts were periodically observed, and the novice had to abstain from eating meat. Much of the training took place in the woods, where the old shaman would teach the novice the curative properties of roots and herbs and, also, how to get in touch with the ghosts of dead shamans. The training would be complete when the novice acquired his own spirit helper, which was always the ghost of a dead shaman. Sometimes the revelation was so powerful that the young novice would fall to the ground in a trance. The spirit that then appeared to him instructed him how to make a flute (either *emini* or *kanagéra*), which he kept in the sacred flute house, and gave him a special tune by which he could always call his spirit helper. The novice had then to prove himself by curing some sick person or by finding lost property. If he were successful he became a recognized shaman.

Before beginning a performance, shamans always fasted for several days and smoked heavily. In curing a sick person the shaman asked his spirit helper for instructions which usually were explanations of how to remove objects from the body which caused the illness. Besides removing objects from the body the shamans prepared medicines. Headaches and pains in the body were cured by juice of the *peméira* tuber, and *turógi* leaves were used for pains in the chest. For healing the wounds made by the scratcher the juice made by boiling the *kumatáni* plant was used. The Bacairí also prepared aphrodisiacs from the *katáino* plant and by mixing piqui nuts, honey, and turtle eggs.

### GAMES

The Bacairí played, and still play, a form of Indian football called *toinyaméli*. The ball (*toin*) was made by covering a round gourd with native rubber, leaving a small opening. The gourd was

then crushed, the pieces were taken out through the hole, air was blown into the ball, and the hole was covered over with rubber. The balls varied in size from 3 to 8 inches in diameter. The game was played on a field about 50 yards square with four goals placed midway on each of the four sides. Small white circles (*shipíri*) marked the goals, and another circle about a yard in diameter (*yotári*) was placed in the center of the field.

The game was played by two teams with equal but varying numbers on each side. One team, called *piáto*, had the north and east goals, and the other team, called *tosúundo*, had the south and west goals. To score a point a team had to put the ball across the opponent's goal. The ball could not be carried in the hand but could be kicked over the goalkeeper. Each side had a leader who did not play but encouraged his players. The organizer of the game threw the ball from the center of the field to the *piáto* side at the beginning of the game or when the ball went out of bounds. The game lasted until the players were tired, the winners being the team with the greater number of points.

The Bacairí also organized wrestling matches called *tadáinpudili*. The object of the match was to knock down the opponent by pushing or hitting with the shoulders; grasping or hitting with the hands was not allowed. The loser was the one who had the greater number of falls.

### CEREMONIALISM

Among the Bacairí ceremonialism was highly developed. Although songs and dances were performed whenever the people had an abundance of food and economic activities permitted the leisure time, there were special occasions (the ripening of corn, ear piercing of boys preparatory to going into seclusion, the coming out of seclusion of a woman after childbirth, house building, the distribution of cotton by women) during which particular songs and dances had to be performed. At these times it was customary to invite people from neighboring villages to participate in the festivities.

The musical instruments of the Bacairí consisted of rattles and flutes. The drum does not appear to have been used. Rattles were of two kinds: the common gourd rattle (*páko*) and piqui

nut hulls tied together and fastened to the ankles of the dancers. There were at least four kinds of flutes. The *emini* flute was made from two pieces of soft sapling hollowed out and fastened together with wax and string. This flute was about 3 feet long with four finger holes and a separate mouthpiece. The *kanagéra* flute was made like the *emini* but was shorter and had a different sound. Both the *emini* and the *kanagéra* were sacred flutes of the shamans and were always kept in the sacred flute house connected to the *kadoéti* where they were played only at night so as to prevent women from seeing them. If a woman were to see one of these flutes, misfortune would befall her. When the sacred flutes were played there was dancing but no singing. The *tadánwa* was a bamboo flute made in five different lengths without finger holes and was not sacred. The *nokigóra* was made by fastening four short tubes of bamboo of different lengths together. It was played in pairs, one player answering the other. This flute was not sacred and could be accompanied by singing. In addition to the rattles and flutes, the Bacairí used highly decorated sticks or batons called *kadóapuri* in some of their dances.

Besides the flutes and the dances performed to their tunes, the Bacairí had songs and their corresponding dances which were not always accompanied by flute music; for instance, the *oriko* was a song and a dance performed with the decorated batons which could be performed at any time; the *pahoewáto*, another general song and dance which also could be performed at any time; the *yawaisári*, the corn song and dance in which neither the flutes nor batons were used; the *mahulawári*, performed during the house building ceremony without batons or flutes; and the *poinwáto*, sung and danced during the boys' ear piercing ceremony.

One of the most important ceremonial events of the year was the annual corn dance (*anjéint-abtleni*), which was performed when the corn ripened in the fields. The man who had the largest corn crop was the organizer of the ceremony. In order to have enough corn, the Bacairí usually planted special fields, the yields of which were used on this occasion. On the day before the corn gathering all the men went on a big hunt in order to have large quantities of meat ready for the feast. Early in the morning of the following day everyone went out to the fields to

gather the ceremonial corn. Later in the day the women prepared large quantities of corn porridge and roasted ears.

On the morning of the third day the actual ceremony began in front of the *kadoéti*. The organizer of the dance distributed roasted ears or pieces of ears to all the villagers, children included. Then at a signal from the leader, the villagers began throwing the roasted corn in all directions and at one another. After the roasted corn was disposed of, the people ate the corn porridge and meat prepared on the preceding day. They then washed themselves in the river and put on their paint and ornaments. When the villagers had again gathered before the *kadoéti* the dance leader took a piece of corn husk and went from man to man asking for a song leader. The man who took the offered corn husk then began the *yawaisári*, or song in praise of corn. Little by little the others joined in the singing and eventually began to dance. The words of the song told how corn came to the Bacairí and how it made the people strong and healthy.

The *ransegéro*, or ear-piercing ceremony, was performed just before a boy went into puberty seclusion. It was customary for men who had sons of about the same age to cooperate in getting large quantities of food ready for the feast. After the feast was over the ears of the boys were pierced and the *poinwáto* song was sung. When boys and girls came out of seclusion there was another ceremony during which all the songs and dances were performed with the exception of the sacred flute tunes.

The *mahulawári* was performed during cooperative house building in which the whole village participated. While the women prepared food and some men were putting up the frame, a certain number of men went in search of palm fronds for thatching. When these men returned with the palm fronds they danced and sang before the new house with their loads on their backs and in full ceremonial regalia.

The custom of distributing cotton by a woman with a good cotton crop and having other women weave hammocks for her has already been mentioned. When the women had completed their weaving and returned the hammocks to the donor of the cotton, she gave a feast during which the women sang and danced the *yamaikúma*. This



dance was given at night accompanied by flute playing.

When a woman came out of seclusion after the birth of a child the women of the village danced to the tunes of the *tudánwa* and *nokigóra* flutes.

### ORIGIN MYTHS

Although the Bacairí have many myths, only two were obtained. One of these is the *yamadilli*, or the origin of day: In the beginning it was so dark and cold in the world that the people had to cover their bodies with grease to keep warm. The people wanted the sun to come out, so they put on their ornaments and painted their bodies and began to pray to *orimóto*, the great spirit who lived in the north. The Bacairí believed that *orimóto* was not an Indian but just a man who lived in a stone house with some of the animals which he had created. The people continued praying to *orimóto* and when light finally came the people were old and the children had grown up.

*Yavétihadúho*, or "those who died in the fire," is a story which tells about the origin of cultivated plants and the *yawaisári*, or corn dance: Once long ago there were a number of boys who were in puberty seclusion. At that time there were no cultivated plants, the people living by hunting and collecting wild plant foods. The boys were kept in seclusion so long and had so little to eat that they became very tired. One day when the relatives of the boys went out to collect food the boys all committed suicide. When the relatives returned and found the boys dead they were sorry and angry with themselves for neglecting them. They built a large fire and after dancing around the fire naked they jumped into the flames and were burned to death. The leader of this act was *yawíti*. Later the soul of *yawíti* returned and spoke through one of the living Indians. He explained to the Indians how to grow corn and other food crops and how to perform the corn dance. After that the corn dance (*yawaisári*) has always been performed.

As the Bacairí formerly lived in association with the other Upper Xingú tribes, it is perhaps useful to compare their following origin myths as gathered by Von den Steinen with those of the Camayurá. There appears to be a close resemblance between *Kamuschini* of the Bacairí and

Mavutsiné of the Camayurá. Both are original personages. It is also interesting to note that the Bacairí myth speaks of a time when there was maize but no manioc. Camayurá legends speak of the origin of manioc only. All the tribes are made from uba cane. The Camayurá, as we noted, were made by Mavutsiné from *camiuwa* wood.

*The Parents of Keri and Kame.* The first part of this legend takes place in heaven. At that time there was almost everything that there is on earth today. They tell nothing of their own creation, they narrate only how it is that the heroes Keri and Kame obtain of other personages a part of the useful and important things. The Bakairí always existed, even if "in the beginning there were only a few." There were also other people that were not Bakairí, chiefly the different jaguar tribes and their relatives, who killed and ate many Bakairí. Kamuschini, with whom the story begins, also was "of another people."

Kamuschini went into the forest in search of tucum palm leaves to make bowstrings, where he met the jaguar Oka, whom he feared very much, and promised to get him some women if he were spared. First he felled red wood trees (*sewéti*), took the logs home, put them in a maize mortar, blew on them, and went away for a little while. But when he returned all the logs had turned into men who were busy making arrows. He killed them and went to fell five or six trees of another species which he handled as he had the other ones.

Returning, after a short absence, he saw that this time the trees had turned into women. They all called him "papa" and—with the exception of the last two, who, remaining seated without moving, infuriated him and he killed them immediately<sup>42</sup>—were busily grinding maize—"they say that at that time there was no manioc"—to make beijús and drinks. Kamuschini gave the two eldest ones, Nimagakaniro and Ichoge, to the jaguar Oka, who took them home. On the way, however, Ichoge, climbing a burity palm for nuts, fell to the ground and died.

Nimagakaniro swallowed two Bakairí finger bones, which were spread around the house in great numbers as Oka used them to make arrowheads with which he killed many Bakairí, whose flesh he ate. It was due to these bones, only these, not Oka, which made her pregnant. Now, however, destiny threatened her in the person of her mother-in-law, Mero. Her husband is not known and besides Oka she had two other jaguar sons, Kuára

<sup>42</sup> I obtained the names of five women: Nimagakaniro, Atanumagale, Ichoge, Koyaka, and Tawaguri. In my Bakairí grammar, p. 226, I erroneously wrote that Kamuschini felled five piqui trees and committed the injustice of attributing to him a mistake. The name Ichoge contains *ipó* piqui (*ixó* - *ge*, with pique). Tawaguri also is the name of a tree, of which the two lazy ones were made, in Portuguese it is called "olho de Boi" (bull's eye). Koyaka (*koyá*-*ke*, with *koyá*?) grew out of a tree with rough bark and yellow fruit. About Atanumagale's tree origin Antonio could give no further information. Both she and Koyaka were also wives and mothers of jaguars, although this information is given as uncertain. Later on Atanumagale is designated as the wife of Kuára, Mero's son.

and Zuapányua. One day Mero visited her daughter-in-law while Oka was out hunting; "she did not want him to have sons by a Bakairí woman," because she hated and ate them. With her claws she tore out Nimagakaníro's eyes and went away. Nimagakaníro died, but uncle Kuára—a jaguar, who in heaven practices the "Caesarian operation" on a dead woman—opened her womb and took out the twins Keri and Kame whom he put in a calabash like young parrots. Then he and his men cut Nimagakaníro into pieces, roasted and ate her. When Oka came home, they offered him the leftovers which he ate unsuspectingly. After he heard what had happened, Oka became very angry and ran to kill Mero but desisted when she said "I am your mother." A jaguar foster father raised Keri and Kame; he let them ride on his back and taught them to shoot with arrows. One day they asked him about their mother; he had not told them about her death because he was ashamed to have eaten of her flesh, and even then he did not tell them. However, their grandmother, or Aunt Ewaki, who belonged to the Bakairí race, and who is mentioned here for the first time, told the two about Mero's crime. Keri and Kame went and killed Mero although she received them kindly, greeting them, "Oh, my grandsons."

"Damned Mero (Antonio hated her with all his heart) was not buried, oh, no, she was burned." Keri and Kame made a stake, lighted it, then they dug a hole from where they could watch. Mero burned *bopopopo* . . . The fire can still be seen today in the big Magalhães cloud. At that time Keri and Kame did not yet have human form. Kame was curious and crawled out of his hole and caught on fire. He burned and died. Keri blew on him and made him a nose and hands and feet as men have. But Keri too caught on fire (the small Magalhães cloud is the fire of Keri and Kame), burned and died. Kame blew on him making life return to him and gave him a human form. Then there came three animals which can still be seen in the sky, the small otter which took Keri and Kame's tails, the big otter (ariranhá) who took their hands and feet, and the toucan took their beaks. Keri's beak was bigger than Kame's.

Now the two appeared in human form and began, shortly, their activities in benefit of the living. But then what did Kamuschiní, Mero and Oka look like? "Oka is the spotted jaguar?" "Yes." "And he shot with arrows?" "Yes, then the Jaguar shot with arrows." "He shot the Bakairí and ate them." Mero had some resemblance to the jaó (*Crypturus noctivagus*) and the macuco (*Tinamus brasiliensis*), two gallinaceous birds. But her claws were as big as thumbs. "Then the mother of the jaguars was a bird?" "Yes, they say that even today the jaguars will not eat jaó nor macuco." This again is a typical Indian reason for an absurd relationship between the jaguar and the wild forest hens. Should there be a historical reason it is inseparably amalgamated with the zoological one. "Mero ate so many Bakairí, that hardly any were left. Keri had to make new ones."

Kamuschiní is also connected with animal life and although we can conceive his story in heaven we need an even greater imagination to understand it. He "is black,

has sparse hair, and makes threads like a spider." "Spiders come every year in July and breed; in August and September, when the rains come, they make threads and go up to heaven leaving the thread hanging down behind them."

Keri and Kame now have human forms. Now also they avenge the death of their mother on their foster father. But they do not dare do it and want others to do it for them. They ask the jaguar to make arrows for them. The two brothers put these upright in the ground in a circle and blow on them. "Thus came" the Kayabí, neighbors of the Paranatinga Bakairí, who, so we are told, lived in peace with one another in former times but became deadly enemies because of stone axes and women. The arrows, which the jaguar made for Keri and Kame and to which by magic, they added the Kayabí; were stems of burity leaves, for at that time Keri and Kame were still children and used children's arrows. Keri told the Kayabí to shoot Oka but they missed him. In view of this, Keri resolved to shoot him; the arrow went into the jaguar's knee, "the jaguar jumped into the water and escaped." The myth then says simply that "then they killed their father," but Antonio added "if the jaguar had been killed there would not be any today."

*The Sun.* Then, Ewaki, the aunt of Keri and Kame, ordered them to get the sun, who was kept by the red urubú or urubú-rei (vulture.) Everything that was told up to now took place during the night before the urubú-rei came. In the zenith there was a red hole which belonged to the urubús. Because it was a dark night, the tapir, which can be seen in the Milky Way, fell into the hole. Keri saw the tapir and went in as his paw.<sup>44</sup> Kame, however, went in as a small yellow singing bird, which resembles the bemteví, and sat on a branch from where he would be able to inform Keri, who could not see, of all that happened. The red urubú opened the sun, it became light and the urubús discovered the tapir. All the urubús, black ones and white ones—only the red one still stayed at a distance—attacked the tapir. They brought cipó cords, with which, after much work, they pulled him out of the hole. Then they wanted to cut him up. At that moment, Kame, who saw everything from his branch, sang "nem, nem, nem". Keri blew and the urubús could not open the tapir with their beaks. They asked the urubú-rei to help them. When he came near Kame stopped saying "nem, nem, nem". The urubú-rei opened the tapir with his beak but at that moment Keri attacked him and held him so firmly that he nearly killed him. Keri told him he would let him live if he would give up the sun. Then the urubú-rei sent his brother, the white urubú, to bring the sun. The white urubú returned, bringing the red of the sunset. "Is this right," Kame asked Keri who had to hold the urubú-rei. "No, it was not the red of the sunset that I asked for," replied Keri. Then the white urubú brought the moon. "Is this right?" asked Kame. "Of course not!" replied Keri. Then the white urubú brought the sun and when Kame asked

<sup>44</sup> Old Caetano told me that Keri made the tapir of *aka*, a wood as soft as manioc, and then he made small flies which caused the tapir to smell bad so that the urubú would be attracted.



again "Is this right?" Keri responded "Now it is." Then Keri let go the red urubú who was furious.

At that time the moon was made of japú feathers, the sun of toucan and red arara feathers and the red of the sunset of toucan feathers. This was what the ancient ones were taught. If it is different now, as you say, I know nothing about it, nor does anyone else. Then someone had to blow in order to make the sun turn to fire.

Keri thought for a long time about what he should do with the sun and the moon. It was always day. Ewaki, also, could not tell him what to do. At last he made a big pot and put it over them. Then it was dark. Keri gave the moon to Kame. When he took away the pot it was day. . . .

*Sleep and Burity Hammocks.* I do not know if the necessity to sleep manifested itself with the long continuation of clear irradiation by the sun when it was still uncovered, but in any case Keri and Kame wanted badly to sleep, but they did not know how. Discontented, they went to find Ewaki, their always well-informed aunt, who told them where they could find sleep. Po, the lizard, owned sleep. He received Keri and Kame kindly and said, "Oh, my grandsons." They stayed at his house and lay in a hammock of burity and slept. When they awoke, they felt better. The next morning they said goodbye and went away taking the hammock which the lizard had given them.<sup>45</sup> On the road, after they had walked a league, they wanted to try to sleep. They lay down in the hammock but were not able to sleep. They tried and tried in vain. They returned then to the lizard's house, they caught him and pulled out his eyelids, of which they took a very large piece. The lizard became very angry but Keri and Kame now had eyelids and were able to sleep.

*Exchange of Heaven and Earth.* It was also at that time that Keri left the heaven. "At first the earth was heaven; here, where we are now, the Bakairí were not born. The heaven has a floor, the same as the earth. Heaven and earth are very close to one another; from there one can cross over to here." Keri said to heaven, "You should not stay here. My people die here. And you want to stay here? You are good. But I do not want my people to die." Heaven responded, "I want to stay here." Keri said then, "Then I move." He went with all the people to the earth and the heaven went there where it is now, and where today one is able to see that everything happened as the Bakairí say.

*Fire.* Keri and Kame went to Ewaki who sent them to go and get fire. The fox owned the fire. He had it in his eyes where it gave a leap when he wanted to light a fire. The fox (*Canis vetulus* "catches crayfish and crabs," Brehm *Saugeterie II* S. 57) had put out a bow-net to catch fish. Keri and Kame went there and found in the bow-net a "jejum" fish and a snail. Keri entered the "jejum" (a smooth lake fish about 4 inches long) and Kame entered the shell. "Each was well hidden in his animal." The fox came, singing, and made a fire. Then he went to see

what was in the net and took the fish and the shell putting them on the fire to roast. But the two brothers poured water on the fire. Furious, the fox picked up the snail, but it jumped into the river and brought more water, poured it on the fire almost extinguishing it. The fox caught him again and wanted to cut him into pieces on a piece of wood, but the snail escaped to the other side. With this, the fox lost patience, and went away very angry. Keri and Kame blew on the almost extinct fire and took it to Ewaki.

*Rivers.* Ewaki sent the two boys to get some water. They wandered about for 3 days. There they found three pots which belonged to Ochobi, a watersnake. There was water in the pots; two of them contained good water, but the third, bad water, which one could not drink without dying. They did not touch this third pot, because they only wanted good water. They broke the other two pots, the water which flowed from one was the Paranatinga, and of the other, the Ronuro and Kuliseu.<sup>46</sup> Keri took care of the Paranatinga, and Kame of the Ronuro. Both rivers continued to flow and Keri and Kame ran each after his river; they each called to the other, so that they would not get lost. Suddenly Kame's voice could no longer be heard. Keri shouted and shouted, but no answer came. Then he made the Paranatinga stand still and wait, and went to the Ronuro. Silly Kame had chosen the worse river, and could not master it, the water had spread and grown and Kame was drowned. An enormous jahú fish swallowed him. Keri came and found the Ronuro standing still, Kame having disappeared. At once he began to fish, he caught three jahús, one of which was swollen. He opened his belly and saw Kame, who was dead. He laid the corpse on big green leaves and blew on it. Kame got up and said "I slept very well." "No" exclaimed Keri, "You certainly did not sleep. A jahú devoured you." They were bored with the Ronuro and so Keri called a duck and told her to lead the water on. Thus the duck conducted the river farther on and the two boys—who, then, were about 8 years old, as Antonio ascertained, comparing them with the son of a German whom we had met in Cuiabá—returned to the Paranatinga, which was patiently waiting. Keri said, "This is the water which we shall take along."

For three days they walked on with the river toward the valley. Then they came to the fall of the Paranatinga, which was not yet a waterfall but only a dry rock. They took the water up to the falls and then let it wait on the other side. As they wanted to stay where they were, Keri called ducks and pigeons and other birds, which took the water forward.

*House, Fishing, Ceremonial Dances, Tribes.* The reason why they stayed at the waterfall was because Tumehi or Tumeng, a grandfather of Keri, lived there. He was the husband of the grandmother, or as we have called her up to now Aunt Ewaki (mother and aunt, great-aunt and grandmother have the same value in kinship relationships). Tumehi was a bat and had a gray-black skin. Old Caetano referred to him sometimes as Semimo (Bak. *semímo*

<sup>45</sup> Another time I was told that before there were hammocks, people slept standing up, leaning against trees. Protection against snakes and malignant insects is really one of the greatest advantages of the hammock.

<sup>46</sup> In the myth, only the Ronuro is mentioned, but Antonio added "that was the water of the Kuliseu River."

morcego) and sometimes as King of the Congo. The latter expression the old man had heard from the fugitive slaves or farm workers and applied it to the black Tumehi. Tumehi belongs to the oldest kinship group just as Kamuschini, Mero and Ewaki and probably his real name is Semimo, since *tumehi* and *tumeng* are adjectives. Before the water reached the falls, this was his stone house; it is not astonishing that the bat should be considered the builder of clefts, as it prefers these clefts for its "habitat" and that these with one or the other outstanding rock above them be considered a house. Tumehi was also a mason.

Keri and Kame asked Tumehi to build a stone house for each of them. Tumehi, in order to obtain stones, blew on termites: it was thus that stones originated.

They also learned other things from Tumehi at the waterfall. The grandfather, rich in knowledge, showed them how to make and lay out bow-nets and how to catch fish, *matrinchá*, in them. He taught them, also, how to make a grill to roast the fish.

Keri and Kame had now come so far that they might be taken for adult men, they had obtained everything they needed: the sun and the moon, the hammock and sleep, the fire, the best river with a waterfall and fish, houses and fireplaces. Their life had started in heaven and is told up to the time when the real history of the tribe begins in the oldest Bakairí settlement near the Paranatinga Falls.

The Bakairí lived with Keri: his house was on the east side of the falls. They made a hill on the western side from where they could overlook the whole area. First, Kame built a ceremonial hut and a flute. He invited Keri and his people. Everyone danced to the tune of the flute, stamping with their feet and shaking their arms in response to the music, marching from their houses to the flute house and back again. Kame offered his guests pogu and beijús. In exchange they gave him arrows and cotton thread.

After this, Keri also called his people together for a dance; they danced and drank pogu in the afternoon in the big square, which still can be seen near the falls; then they made garments of burity, *makanari* and *imiga*, shook their rattles and played the flute. Now Keri, too, could invite Kame and his people. Many of them came and Keri was the owner of the imeo dance, which lasts two days and nights, refreshing themselves in the morning with a bath in the river.

But because of the people the brothers began to fight during the dance. Keri had made many Bakairí of ubá cane, whereas Kame had made none. Keri blamed him for his laziness; they quarreled and Kame, the weaker one, fled. He escaped to the southwest, made a hill at the Beijaflor River, a left tributary of the Paranatinga, and there he made the tribes: Apiaká, Paressí, and Guaná. It is very interesting to note that the Guaná are also mentioned here, being a widely spread tribe, from Paraguay, of whose existence, in this part of the country nobody had heard; a very, very long time ago, they also lived along the Beijaflor River.

Keri climbed a hill at the Paranatinga and from there he could see the smoke far away. He went to visit Kame

and there found many, many people. He scolded Kame, furiously, "Why did you make so many people?" Once again they began to quarrel, but Kame abandoned the Paressí with whom he was living, and returned with Keri to the falls. Within a short time a new misunderstanding arose because of the people. Keri had made more, and Kame escaped, but this time to the Arinos. Keri looked for him, found him and brought him back again to the Paranatinga Falls. It seems that these fights and wanderings are narrated to give both of them the possibility to create a number of different tribes, which live at great distances. Keri created the Bakairí, Kayabí, Bororó, Nahuquá and Mehinakú; and Kame the Apiaká, Paressí, Guaná, Maué, Suyá, Mundurukú, and all "Arinos tribes." I have already given consideration to the fact that all eastern tribes may be assigned to Keri and all western ones to Kame (. . .) and mentioned that there exists a difference between sun-east and moon-west and that Keri, although his name in Arawak means moon, really should be taken as chief of the eastern tribes (. . .) as the Bakairí hero with his moon name, which he received from Arawak women, naturally would be the owner of the sun-east, for the Bakairí. All tribes were made out of reeds, of which arrows are made, and the Portuguese of a dark kind of the color of a gun stock. In the first place, Keri, of course, gave the gun to the Bakairí, but they did not know how to handle it, one shot past another person's ear. They were so scared of shooting as "we saw among the people on the Kuliseu." Then Keri gave the gun to the Caraiabas.

*Parting of Keri and Kame.* Keri and Kame leave the falls and Keri names Arimoto chief of the remaining Bakairí. Arimoto was also born at the Falls. This chief abused his position and killed many Bakairí. "Was he not himself a Bakairí?" I asked. "Probably but he was a vile scoundrel. Had he been good, his descendants would still be the chiefs of the Bakairí." This time Keri and Kame went to the Kuliseu. The Bakairí, in great need, followed them and accused Arimoto. Keri and Kame returned at once, killed the traitor who defended himself violently and tried to kill Keri.

This is the end of the deeds of Keri and Kame, according to the principal myth. They left the Bakairí with many *matrinchás* and went up the hill, from where they once more answered the wildly crying Bakairí and then "went along the trail. No one knows where they went. The ancient ones did not know where they had gone. Today we know much less where they went."

Even though the myth has such a tragic ending, the people had their own opinion about it. Tumehi—not to forget the old bat—left together with Keri. What happened to Kame? "He was always together with Keri. Perhaps he is dead now." And Keri? The divine ancient Caetano, who could adjust himself excellently to new conditions, declared that Keri was the Emperor in Rio de Janeiro, D. Pedro II. The good Bakairí patiently answered all my innumerable questions, because I had told them that I had to report everything to the emperor. And this was of great importance to them. I inquired "and what if the emperor in Rio de Janeiro should die?" "If the



emperor die, then all Bakairí will die too." was the answer, which fortunately, in the meantime, proved to be wrong.

Chief Felipe gave me a different account. "Keri went with a hundred men to the Ronuro and Kuliseu. He sailed down the river into the ocean. This the people at the Batoví also say."

Antonio believed in the text of the myths as he had

learned it from his mother. But in a different context he maintained that Keri lived in heaven, his house being there where the sun rose. "Is Keri the god about whom the Portuguese told you?" "No, that is somebody else, about whom we do not know anything. Keri is the grandfather of the Bakairí [Von den Steinen, 1894, ch. 13, pp. 373-381].

# THE NAMBICUARA

## THE PEOPLE AND THEIR HABITAT

The telegraph line which runs from Cuiabá, the capital of Mato Grosso, to Porto Velho on the Madeira River has created a narrow corridor of the known through the vast unknown stretches of northwestern Mato Grosso. Along this line the Government has established telegraph stations manned by telegraph operators, many of whom are Paressí Indians. A makeshift road, over which trucks can travel, follows the line a few miles past Utiarity to Burity; beyond this the road is no more than a trail along which men ride on horseback and goods are transported by pack oxen. At Vilhena there is an army airfield.

Since 1912, when the line was completed, this corridor has been the highway of men who have sought rubber, diamonds, gold, and Indian souls. No permanent settlements of farmers or stockmen, as yet, occupy this vast hinterland. The rubber concessioner, usually a man from Rio de Janeiro, São Paulo, or Cuiabá with sufficient funds to buy a truck or two, lays claim to a stretch of "galeria" forest, builds a camp along the road, hires a number of tappers, and goes into business. Each underpaid tapper works an area of trees, bringing his rubber to camp on his back or more rarely on oxback. Food must be brought in from Cuiabá, and as supplies, at best, are precarious, any delay in truck transportation brings scurvy and starvation. Eventually the workers drift away, some it is said dying on the way, and the operation ceases. During the last war the United States Government, through the Rubber Reserve, enabled rubber operations to expand. Good camps were established and the road improved. Today, however, the camps and the road are deteriorating, leaving the field to the shoe-string operator with his second-hand truck. The operations of the gold and diamond miners are still more uncertain. In small groups they enter the area, their scanty supplies carried on oxen and mules. Men unfamiliar with the semiarid wastes easily miss the areas where fodder and water can be obtained, the pack animals die and the stranded men are left to find their way out the best they can. At Utiarity I met a miner who was waiting for food supplies from Cuiabá. He had four oxen and two

mules. During the height of the dry season in July his mules died of starvation, for during this period horses and mules must be given at least a pint of maize a day to keep them alive. Just before I left, the miner was willing to sell his emaciated oxen and equipment and leave. The best able to withstand the hardships are the missionaries who come as permanent settlers with adequate stores, put up their buildings, and plant small fields of manioc on the bottom lands.

A brief description of the approximately 400-mile truck journey from Cuiabá to Utiarity will provide the reader with an impression of this part of Mato Grosso. As no regular freight or passenger service exists north of Cuiabá it is necessary either to hire a truck or to wait until someone else plans a trip and to join the party. With gasoline costing one dollar (US\$1) a gallon, trips of this length are beyond the means of merely inquisitive travelers, and even to anthropologists with expense accounts, charges of this nature may lead to embarrassing questions. Hearing that two American missionaries were negotiating a trip to Utiarity we joined them by paying a part of the expense.

Thus one afternoon Kaoro Onaga and I climbed on top of one of the two overloaded trucks and headed northwest. The trucks were owned by a Cuiabano nicknamed João Tapuya owing to his Indian ancestry. Being an owner of two trucks, he belonged to that class of people who believe it undignified to work with their hands. Each truck, therefore, had a driver and each driver had an assistant and two loaders; thus, besides the owner, there were 8 men to operate two trucks. Among the passengers, besides myself and my student, there were the two American missionaries, Rev. Lawrence W. Buckman and Rev. Robert Meader, Buckman's wife and 3-year-old son, two other women with children-in-arms, and some half dozen men headed for various points on the way. It was up to each person to find his place on the load and to make himself as comfortable as possible among the boxes, sacks, and sheets of corrugated iron, which, with each jolt on the rutted dirt road, shifted position.

That evening we arrived in Rosario some 90 miles north of Cuiabá. On entering the town we



had to cross a shallow river which meant unloading and reloading the cargo. In these parts, although bridges are built, they are not repaired so that there is always a period of several months during which the community has to get along without a bridge. The last truck which tried to cross on the ruined bridge nearby fell into the river and it was said a child was killed in the accident. Although having four or five thousand inhabitants, Rosario has no electric lights, no running water, and no public sewage system. I was interested in this quaint old town with its ancient Catholic church and public square, for it was from here that Von den Steinen, Max Schmidt, and many other anthropologists have headed northeast to the Xingú or northwest to Paressí and Nambicuara country.

We put up at a "pensão" or inn where we ate our evening meal of rice, beans, and dried meat topped off with "goiabada" (a kind of stiff, very sweet jam) and coffee. The inn was lighted by lamps common in the interior—a tin can filled with kerosene with a round wick sticking out through the top. Later everyone slung his own hammock from the hooks which stuck out all around the walls for this purpose. Our rest was far from peaceful, however, for other trucks kept coming in during the night, the truckers demanding food and lodging.

Next morning at dawn we were on the road and were soon winding up the steep escarpment to the top of the great sandstone plateau which divides the watersheds of the Amazon and the Paraguay Rivers. At noon, over an open fire, the two Brazilian women prepared a lunch of boiled rice and dried salt pork stewed in vinegar, onions, garlic, and tomato paste. At 6 o'clock we arrived at Parecis telegraph station where we put up for the night in an empty rubber storehouse. During the night the south wind began to blow, and the morning broke cold and drizzly.

After a small cup of coffee we climbed on top of the trucks, wrapped blankets around us, and pulled a tarpaulin over our legs. Although the temperature was not lower than 60° F., the exposure to the wind and drizzle caused considerable discomfort, particularly because the temperature of the preceding day had been around 90° F.

We were now well along on that part of the central plateau known as the Cerra dos Parecis.

The soil here is sandy and the rainfall insufficient to support a forest. The vegetation consisted of stunted piqui, mangabeira, fruta de lobo, lixeiro, and other gnarled cerrado trees with the surface sparsely covered with bunches of wiry grass and other drought-resistant plants. During the whole day we saw only four deer and two rheas, which gives some idea of the poverty of the area. This is public domain and apparently unwanted by stockmen owing to its poor soil and lack of water. By now we had left the telegraph line, which crosses unbridged rivers, and were winding around the headwaters of the streams. That night we camped at Sucuruina where two palm-leaf-covered sheds, left by "tropeiros," provided some shelter from the drizzling rain.

The following day the skies cleared and from the tops of the folds in the plateau we obtained magnificent views of the great plain. What few trees could be seen were no more than 5 or 6 feet high. A curious phenomena seen along the plateau are the patches of forest of 5 to 10 acres in extent which appear to grow straight out of the semi-desert. Evidently ground water comes near the surface in these spots, permitting the growth of a genuine forest. Another interesting sight was the birth of rivers. In the shallow valleys formed by the folds, one could first see swampy ground, then tall grass, then bushes, then short trees, and finally the tall trees forming a "galeria" forest which bordered a river winding its way northward to form one of the headwaters of the Amazon system.

At 4 o'clock we arrived at the Sacre River where the trucks had to be ferried across on a raft. As this operation took until dark we camped for the night in some vacant buildings left by rubber workers. Before leaving next morning we visited the waterfall (Salto Bello) about 200 yards below the ferry where the Sacre River tumbles over a sheer drop of about 180 feet. Early in the afternoon we reached the Papagaio River and after ferrying the trucks across we were in Utiarity. Both the Sacre and the Papagaio are deep clear streams about 100 yards in width at the ferry crossings. These headwater streams are evidently fed by underground water, for their level does not vary appreciably during the year.

Utiarity, which was to be our base camp for the remainder of June and for July, is built on an

old Paressí Indian village site on the west bank of the Papagaio. It is a division point in the telegraph line, and besides the telegraph operator there is a section boss and a number of Paressí Indian linemen. As the Nambicuara take whatever wire they feel they need, the linemen are kept busy repairing the line. There are 12 houses in the settlement proper with the buildings of the Protestant Mission forming one end of the town and the buildings of the Jesuit Mission forming the other.

The line boss, who is also the mayor of the town, gave Kaoro and me a two-room mud-and-wattle house as our quarters. Our meals we took with the two American missionary families. The Catholic Mission was under the charge of Father Roberto, a Frenchman, and Father João, an Austrian. In addition, there were three sisters in charge of a school. The priests had developed extensive fields of manioc and rice, irrigating the fields by diverting water from the river. They had also set up an electric-light plant, using water as a source of power. There are tremendous possibilities for power development, for Utiarity Falls, situated some half a mile distant, has a drop of about 240 feet. Unfortunately this power resource is located in a practically uninhabited, semiarid region.

The Rev. L. W. Buckman, who has been in the area since 1941, kindly consented to prepare a pack train, using the mission oxen and mules, to go in search of the nearest band of Nambicuara. On the third day after our arrival when our preparations were well along, however, a band of Nambicuara came to Utiarity. In fact they were able to get a ride on João Tapuya's trucks as he was returning from Burity, the end of the truck road. This was Julio's band of some 18 people known by the Nambicuara as the Waklításu. Their purpose was to bring one of their men who had running syphilis sores to the Jesuit Mission for treatment. This changed our plans, for we now had one of the four Eastern Nambicuara bands in camp, which would give us plenty to do for the limited period of our visit. Also during the first week, Father João returned from the Iranxe village, bringing five men, and offered to assist us in gathering whatever information we could get from them. This we found to be very difficult, as the Iranxe spoke no Portuguese and the mis-

sionaries had not yet learned enough Iranxe to make working with informants possible.

As all of the following information, unless otherwise specified, relates to the Waklításu band, a short description of this band is in order. Today the band consists of 18 individuals, of which Julio is the chief. About 5 years ago, before a measles epidemic decimated it, the band was roughly twice the size it is today. Julio is a man of middle age, has three wives and two children, and probably holds his leadership by being the strongest and ablest man in the band. Except for one of Julio's wives and her daughter who are Elótasu, the members of the band are Waklításu and related to one another. Julio took the Elótasu woman from the Elótasu band by killing her husband. He claims he did this because the Elótasu chief stole one of his wives some years ago. He claims he is going to steal another wife, for every chief is supposed to have four. Only three other men, Martin, Marciano, and Joaquin, are married, each having one wife. The remaining four are either widowers or as yet unmarried.

Of all the Indians which I have visited in Mato Grosso the members of this band of Nambicuara were the most miserable. Of the eight men, one had syphilis, another had some kind of infection in his side, another had an injured foot, another was covered with some kind of scaly skin disease from head to foot, and another was deaf and dumb. The women and children, however, appeared to be healthy. Owing to the fact that they use no hammocks but sleep on the ground, they are always covered with dirt. On cold nights they remove the fires and sleep in the warm ashes. The Waklításu wear clothes only when they are given by the missionaries, who ask that they be worn. Their distaste for bathing permits not only a covering of dust and ashes to accumulate on their skin and hair but also particles of decayed meat and fish, which, combined with stale sweat, makes proximity to them rather distasteful. They also appear to be heavily infected with internal parasites, for their stomachs are distended and they are continually passing wind. On several occasions when a number of them had crowded into the small room we used for working we had to cease work in order to air the room.

In their manners the Nambicuara also contrast sharply with the other tribes I visited. The



Caduveo, perhaps remindful of their slave-owning past, are proud, conceited, and boastful. The Arawak-speaking Terena and Paressí, like the Arawak-speaking Waurá, are quiet, unassuming, friendly, and ready to help yet take no liberties. The Umotina speak only when spoken to and appear to wish to be by themselves. They provide information if they think the gifts are sufficient and to their taste; otherwise, they saunter off and are never available when required. An Umotina does just what he wishes to do and hates any kind of dictation. The Bacairí and Camayurá are intimately friendly, talkative, and ingratiating, expect gifts and bestow gifts in return, volunteer information, are full of humor and curiosity, and are clean and polite.

The Nambicuara, on the other hand, are surly, and impolite even to rudeness. On many occasions when I went to visit Julio at his camp he was lying down near a fire and as he saw me approach he turned his back to me saying that he did not wish to talk. The missionaries informed me that a Nambicuara will ask for some object several times and if it is not given to him he will try to take it. In order to keep the Indians out they would sometimes close the screen door, but if a Nambicuara really wanted to enter he would tear a hole in the screen and walk in. The Nambicuara have two well-recognized ways of showing disgust or disdain. One day I stopped a woman carrying a burden basket to take her photograph. She evidently did not like being stopped, for as she passed me a moment later she turned her back to me and passed wind. This the missionaries claimed is a very common custom of the Nambicuara. The men have an even stronger way of showing disbelief and disgust. After listening to something with which he does not agree a Nambicuara will get up, grasp his penis, and slap it sharply against his groin and walk off with a "that for you" look. One might call it a Nambicuara "razzberry." Although some of these personality traits are old and culturally defined, there appears to be little doubt that the Nambicuara have a deep hatred of the white man. They realize that the white men are rich compared with themselves and that contact with the whites has brought diseases which are killing them off rapidly. They realize, too, that both the whites and the Paressí consider them in the lowest category of human beings.

The Paressí call the Nambicuara "those who sleep on the ground" and ridicule them in other ways. One does not have to remain long among the Nambicuara in order to feel this underlying hatred, mistrust, and despair, which create in the observer a feeling of depression not unmixed with sympathy.

The Nambicuara is the only tribe I have met who speak pidgin Portuguese, which without some training is almost unintelligible. For instance, "bastante" becomes *marante*, "pequeno" becomes *shibi*, "grande" becomes *papai*, and "criança" becomes *pinto*. If they wish to compare two things to bring out a likeness they say this thing is the brother of something else.

Compared with their neighbors, the Paressí and Iranxe, the Nambicuara are taller, darker, and longer-headed. It is very easy, for instance, even at a distance, to distinguish Nambicuara children from Paressí children when they are bathing in the river. In contrast to the light brown of the Paressí skin the Nambicuara skin appears to have an element of black that gives it a dark-gray undertone. Many individuals have a certain amount of wave in their hair, although the waviness may be accentuated by the unkempt matted condition of the hair. Detailed measurements and indexes are given in Appendix 3. The eyes of the Nambicuara are very dark brown, almost black in some individuals, and have a brightness which contrasts sharply with the rather dull eye of the Paressí. The only other Indians that I have met with this brightness of the eye are the Caduveo. This brilliance of the eyes does not appear to be correlated with health, for even the sick have it among both peoples.

The Nambicuara, as a whole, occupy a territory bounded on the east by the Papagaio River and on the west by the headwaters of the Rio Roosevelt and the Pimenta Bueno River. To the south they extend as far as the headwaters of the Rio Juruena and the Rio Kabishí. To the north they are bounded by a line running roughly from latitude 12°30' on the Papagaio River to latitude 11° on the Rio Roosevelt. Formerly, it is believed, they extended farther northward. The telegraph line runs through Nambicuara territory beginning at Utiarity and ending at Barão de Melgaço to the west. The territory to the south and east of the Nambicuara is occupied by the remnants of the Paressí. To the north of the Nambicuara

are their enemies whom they call the Salundé or Salãosú, probably the Apiões whom the local Brazilians call the Beigo de Pau, owing to the fact that they wear labrets.

Linguistically the Nambicuara are divided into an Eastern and a Western group. Both the Eastern and Western Nambicuara, in turn, are dialectally subdivided. The Eastern group is made up today of four bands: the Elótasu situated south of the telegraph line on the Rio Formiga, a tributary of the Suina River; the Waklítisu just north of the telegraph line on the Juruena River; the Kitánhlu south of the telegraph line on the Camararé River; and the Chiwáisu now including the Hégndisu north of the telegraph line on the Camararé River. The Eastern bands thus extend on both sides of the telegraph line from Utiarity to Vilhena. The Western Nambicuara are composed of at least three bands, the Wáindisu on the Kabishí River (a tributary of the Guaporé River), the Tãondisú and Suéndisu on the upper Roosevelt River. The above-mentioned names were given by Julio of the Waklítisu band. The different subdivisions of the Nambicuara have been called various names in the reports. As far as concerns the Eastern Nambicuara the following names appear to be synonymous. For instance, the local Brazilians call the Waklítisu, Elótasu, and Kitánhlu the Iritoa; these names appear to cover at least part of the people whom Roquette-Pinto called the Kokozú. The combined Chiwáisu and Hégndisu are called the Manduca by the local people, and the Anunzé by Roquette-Pinto. Or, to put it another way, the Eastern Nambicuara of the literature are divided into the Kokozú and the Anunzé by Roquette-Pinto, and into the Iritoa and Manduca by the Brazilians who live in the region.

The confusion in band names in all probability has arisen from the changes in band organization in the last half century. Fifty years ago the Nambicuara were far more numerous than they are today, and no doubt the number of bands was also greater than today. The extension of the name of an important band to lesser bands is thus quite conceivable. The economy of the Nambicuara appears to indicate that there are maximum and minimum limits to the size of a band. If it grows too large for a given area to support, it will break up, or if it becomes so small that its economic

security and marital possibilities are endangered it will unite with some other band.

According to the missionaries who live in the area, the number of individuals in each band of the Eastern Nambicuara are as follows: Waklítisu, 18; Kitánhlu, 45, Elótasu, 17; Chiwáisu, 50. Old census figures give the population of the Western Nambicuara as 500, but the missionaries assured me that they doubted whether even half as many exist today. It must be remembered that an epidemic of measles or "grippe" can diminish the population very rapidly. Syphilis and tuberculosis also exist among them. Judging from the physical appearance of the individuals and their general attitude toward life, it appears that the Eastern Nambicuara, at least, are dying out rapidly.

According to Roquette-Pinto, perhaps the earliest visitor to the territory now occupied by the Nambicuara was Antonio Pires do Campo, who went north up the Sepotuba River, which he called Hisipotuba, between 1718 and 1723, and in all likelihood reached the headwaters of the Sacre and Papagaio Rivers. In his *Breve Noticia* published in 1746, he mentions the Caviro Indians living in the valleys of the rivers running northward into the Amazon River.

Some years later Padre Ayres de Casal mentions a tribe living on the Juruena River, a territory long occupied by the Nambicuara. From 1800 on, rumors about the Indians living in this area increased. In 1862, Dr. Amedée Moure published a monograph on the Indians of Mato Grosso in which he devoted a chapter to the 10 savage, man-eating tribes, among whom he listed the Umotina, Cabixí, Nambicuara, and the Tapanuma (Roquette-Pinto, 1938, pp. 26-51).

The first reliable accounts of the Nambicuara date from 1907 to 1912, the period when General Rondon was putting up the telegraph line between Cuiabá and Porto Velho. In 1912, Roquette-Pinto visited the Nambicuara and the Paressí, and later published the results of his investigations in his book entitled "Rondonia." This book undoubtedly is the first anthropologically competent report about the Nambicuara. After 1910, small Government Indian Posts were established, one at Tolosa on the upper Cravari River, a short distance east of Utiarity, and another called Pyreneus de Sousa between Campos Novos and



Vilhena. These Indian Posts have had only limited success in attracting the Nambicuara, because the region is agriculturally so poor that it is difficult to grow enough food to maintain a settled population, and at present the Indians only visit these posts occasionally.

Intensive missionary activity among the Nambicuara began when two American Protestant missionaries, Arthur F. Tylee and William R. Henricks, established a mission station at Juruena in 1925. In October 1930, the Reverend Mr. Tylee, his baby daughter, Miss Mildred Kratz (nurse), and three Brazilians employed by the mission were killed by the Nambicuara belonging to Julio's band. Mrs. Tylee, although struck three or four times on the head while rushing to her child who was still in bed, was only stunned and came to after the Indians had left. One Brazilian hired man escaped to get help from the telegraph station. Some years later new Protestant missions were established at Campos Novos (Nambicuaras) and at Utiarity. At present only the mission station at Utiarity is in operation.

The Jesuits established a mission at Juruena about 1930, but in 1940 moved it to its present site in Utiarity. Today both the Protestant and Catholic missions are, therefore, located in Utiarity, which not only is connected by truck road to Cuiabá but is also centrally located. To the east and south are the remnants of the Paressí, and to the north, the Iranxe, who, although not speaking the Paressí language, appear to belong to the Arawak-speaking family. Further northward are tribes with which the missionaries are planning to make contacts. To the west are the Nambicuara. Although officially on friendly terms there is considerable tension between the Protestant and Catholic missionaries, as they are competing for the allegiance of the same Indian population.

### ECONOMY

Although the Nambicuara practice a shifting agriculture, their dependence upon the wild animal and plant life of the region is so extensive that they might well be classed as nomadic hunters and collectors. The semiarid plateau provides little in the way of agricultural land, game, or fish. What little farming is practiced is carried on in the narrow "galeria" forests of the

headwater streams. The deep clear streams make fishing with *timbó* difficult. Game in the forests and on the plain is scarce. Yet by exploiting all the resources of the area the Nambicuara are able to survive. In contrast to the other tribes reported in this monograph the Nambicuara have the broadest resource base, as the list of their resources in Appendix 1 indicates.

The Eastern Nambicuara occupy the high plateau between Utiarity and Vilhena. At Utiarity the altitude is 442 meters and at Vilhena 665 meters. The dry season extends from May to September. Except for occasional south winds, which bring a cold drizzling rain for a day or two, the season is clear, cool, and dry, the daily temperatures ranging from 60° to 80° F. During this period the grass withers, the livestock of the white men having to subsist on shrubs and what fodder the owners can provide. Horses and mules, particularly, suffer during these months. In August the Indians burn the dry grass so that with the first showers new grass can grow out and attract the deer, which the Indians can then hunt.

The dry season, which the Nambicuara call *kwénkisu*, is the most difficult. By the end of June they have consumed the manioc, maize, beans, and other crops which they have planted. During July and August they subsist on palm nuts, *combarú* beans, *fruta de lobo*, snakes, insects, fish, and whatever animals they can kill on the plateau or in the forest. The rainy season (*wahíasu*) is divided into periods depending upon the fruits as they come into season. September is known as *yadédunsu*, for during this period the people depend upon the jaboticaba fruit. October and November are called *ya'awadjítsu*, for during these months the bacaba palm nut ripens. December and January are termed *áhru*, or piqui time. February and March are known as *casúru*, which appears to cover a variety of berries and small fruits. April and May are termed *darugadítsu*, as many fruits and nuts come into season, particularly, the cashew nut. During these months the garden crops also come in, giving the Nambicuara a short period of abundance.

### SETTLEMENTS AND SHELTERS

Each of the four Eastern Nambicuara bands has a defined area within which it hunts, fishes, collects, and grows its crops. These territories in-

clude at least one stretch of river and the "galeria" forest which lines its banks. Except during the planting and harvesting season the members of the band are on the move up and down the narrow confines of the territory. Within this hunting territory they have camping places rather than villages. A semipermanent camp site where fields are cultivated for 2 or 3 years is known as *sinaiésu*. Any place where the band or a family may stop overnight is known as *siénsu*. At present the Waklításu band has one house (*sísu*) at the place where it is farming. The entire band occupies the house, each family having its own fire around which it sleeps at night. The unmarried men gather around another fire. Julio informed me that their house is rectangular with stake walls and a gable roof covered with sapé thatch. Some years ago when the band was larger he said they occupied a different place on which they built three houses. These houses were built by placing a series of saplings into the ground to form an oval. The tops were then fastened to a ridge pole, the framework being covered with sapé or palm fronds. A smaller beehive-shaped house is made in the same way. Houses of this type are from 6 to 10 feet high. Near the living house they build a small flute hut (*sinedónklesu*) and, when the occasion demands, a shaman's hut (*sihdéntsú*).

If the weather is cold while they are out hunting the band or the family may build a temporary brush hut for the night. Sometimes only a wind-break (*siotáutsi*) is considered sufficient. On warm nights during the dry season the group camps under a tree. In favorite hunting places the same camp site will be used repeatedly. When the soil around the permanent camp site or village becomes exhausted, fields are cleared some distance away and small huts are put up for the workers. As the distance increases the old camp site is eventually abandoned and a new camp site is established.

As the Nambicuara do not use hammocks, beds, or seats, there is not much in the way of furniture in their shelters. Utensils are restricted to a few gourd vessels, tin cans, burden baskets and small flat baskets, fire fans, bows and arrows, and tools used by men. When they move, these articles are placed in burden baskets which are carried by the women. The Waklításu do not

make pottery, but they sometimes acquire pots from the Paressí in exchange for game or fish.

#### HUNTING, FISHING, AND COLLECTING

Today, at least, the Waklításu band is a producing and consuming unit. Whatever a man or his family gathers is shared among the band. This, however, does not mean that the whole band goes out every day or that they keep together while out hunting, fishing, and collecting. Except when the men go hunting such large game as the jaguar, tapir, and peccary, the acquisitive unit is the family. Every morning while Julio's band was camped in Utiarity a family or two could be seen going out, the husband walking in front armed with bow and arrows, the wife following and carrying a burden basket on her back and a baby strapped on her hip, an older child following her. As they move slowly along they collect fruits, nuts, insects, snakes, ants, lizards, rats, wild honey, and a great variety of grubs or larvae. When they come to a pond they wade around with small baskets in their hands and scoop out small fish. On one of these trips I observed them catching fish that were only 2 inches in length. These were later thrown on hot coals and eaten without being cleaned. Small birds no larger than a sparrow are shot if the man can get near enough to use his bow and arrow. If they come to a burití stalk of the right size they will cut it down, put it into the burden basket, and take it to camp. On their way home they will usually pick up dry firewood. Thus, when a family returns at nightfall the basket will be full of a wide assortment of foods and useful materials.

Monkeys, deer, and large birds are generally stalked by a single hunter, particularly if he has a gun. Julio and Marciano each owned a shotgun and quite often hunted alone. If a man goes out in the morning and runs onto a group of peccaries he will hurry back to camp, and all the men will then go to where the peccaries are feeding. When they hear the peccaries the hunters will form into three files, one heading directly toward the pigs, the other two flanking the game on each side. When near enough the middle file stops and spreads out, the other two files then slowly surround the pigs. As the flanking movement is going on the pigs sometimes move, but the middle group of hunters maintains contact



with them and informs the flanking hunters with bird calls. When completely surrounded the flanking parties drive the pigs back against the central group where the best archers are stationed. As the pigs charge back, they are shot at close range. Usually an arrow will stop a peccary so that it can be killed later with a club. If the hunters are well organized very few peccaries escape.

The hunters then open up all the pigs and take out the viscera. The entrails are emptied and along with the heart, liver, etc., are thrown on hot coals to broil and are eaten on the spot. When opening an animal the hunter grasps a handful of skin over the belly and cuts it off with a bamboo knife leaving a round hole through which the viscera are drawn out. After everyone has eaten, the carcasses are carried back to camp where the meat is cut up and shared among the families, the man with a large family getting more than one with a small family even though the man had not shot anything. All meat that cannot be eaten in a day or two is cut up and dried.

The Nambicuara now have a few dogs which they use when hunting jaguars. The dogs drive the jaguar into a tree where it can be shot with a gun or with arrows. Sometimes a wounded jaguar will attack the hunters, and injuries occur. Marciano's 6-year old son had his head and face clawed by a wounded jaguar which his father was not able to kill with the first shot of his shotgun.

Armadillos are dug out of holes. The soil is first loosened with a stick and then dug with a gourd, the diggers sometimes having to go as deep as 8 feet. When they get near the armadillo they put a long stick under it and force it up against the top of the hole in order to prevent it from digging further. When near enough a man reaches into the hole with his hand and pulls out the armadillo. If the hunters are very hungry they will roast the armadillo on the spot, taking left-over pieces of roasted meat home to their families.

Although sharing is the custom, and it is amusing to observe several men sitting around a 6-inch lizard to eat it, single hunters sometimes succeed in avoiding their obligations. One day as I walked along with Cascudo, followed by several Nambicuara some distance behind, he killed a snake and threw it into the bushes and signaled

to me not to say anything. Later that day he returned to the spot, built a fire, roasted the snake, and ate it by himself.

Caymans are hunted by first finding their hide-outs under logs or overhanging banks. When one is found under an overhanging bank the hunters peel a number of slender poles and begin to thrust them down through the bank to force the cayman out. Men are stationed above and below the spot, and as the cayman comes out he is shot. When he hides under logs the hunters feel for him with their feet. The hunters are so nimble that few of them get bitten. The large rodent, paca, is also hunted in this way, for it hides in holes under overhanging banks.

The large water snake, anaconda, is hunted in pools where it lies in wait for game. When the hunters have trailed an anaconda to a water hole they keep shooting arrows into the water until they strike it. The first strike then indicates where the snake is, and they continue shooting until the snake weakens and can be pulled out. Sometimes the snake grabs a hunter by the arm, but the others are there to assist if anyone gets into difficulties.

Small anteaters are dug out of holes but the larger kind which does not go into holes is hunted by two men armed with clubs. The men chase it, one on each side, and as the anteater turns on one he strikes it on the nose with his club and then jumps into a tree. The other hunter then strikes it. This continues until the anteater dies.

Monkeys are chased from tree to tree until they tire and come down to hide in a hole in the ground. Dogs can then overtake the monkey or he can be shot or dug out of the hole. Deer usually do not fall when shot, but the hunter chases the wounded deer until he can shoot more arrows into it, especially into the legs.

Although the Western Nambicuara are said to use arrows poisoned with curare, the Waklitisu say they do not use curare but that they know how to prepare it and that they formerly used it in raids. As arrows do not penetrate bone, the hunter tries to shoot at an angle so that the arrow will enter the chest cavity, or he will aim between the neck and the shoulder bone.

The Nambicuara hunt and eat all birds except the urubú. Large rheas are not hunted because it is difficult to approach them on the open sa-

vanna, but they hunt for rhea eggs and the young birds.

When hunting caymans they do not use the word "cayman," nor will they take their eggs for fear of angering the mother cayman. After a jaguar or tapir is killed the hunters sing and dance the following night.

Every group hunt has a hunt leader who is an experienced man. He tells each man exactly what he is to do. Hunting such animals as peccary, tapir, and jaguar demands careful teamwork. If the band splits up to hunt, the band chief will appoint the hunt leaders. If any man disobeys the hunt leader he will take the man's bow away from him and send him back to camp where he has to listen to the ridicule of the women. This is considered a great humiliation and happens only seldom and then to youths who are, as yet, inexperienced and overanxious to make a kill.

As the Nambicuara hunt along the banks of the rivers they are always ready to shoot any fish that happens to come near the bank. Sometimes they stand in one spot for hours waiting for pacú or matrinchã to pass near the bank. Certain berries which the fish like to eat are often thrown into the water to bring fish to the surface. At other times they tie a piece of broiled meat onto a stick and push the stick into the bottom. A man then stands on the bank, sucks air through his cupped hand, and as he lets the air out with a grunt he motions with his hand as if beckoning the fish to come near. This appears to be a magical act, for the Nambicuara claim that the fish understand the call. Sometimes they even talk to the fish saying that they have brought fat meat for them.

Timbó fishing is practiced in the shallow cut-offs of the main streams. First the pond is dammed off, then bundles of timbó vine (*kúnte*) are thrown into the shallow water and beaten with sticks until the vines are crushed, the bundles are then doused in the deeper water. As the fish in the ponds are very small, they are scooped up with baskets, either the cylindrical burden baskets or a shallow square basket. They also use a conical trap made on the spot from a few sticks which they thrust into the weeds where the fish are hiding. When they have finished with this trap (*tanáru*) it is thrown away. Compared with the efficient equipment and methods in the Upper

Xingú, the Nambicuara timbó fishing appears very elementary. The small fish are wrapped in leaves and placed in hot ashes until cooked. Large fish are broiled on a babracot. The Nambicuara also claim that they fish at night with torches along the river banks. This method may have been taken over from the Brazilians.

#### AGRICULTURE

The principal food crops grown by the Nambicuara are bitter manioc, sweetpotatoes, arrowroot, cará, maize, beans, and peanuts. To this list we must add such nonfood crops as cotton, tobacco, urucú, and gourds. The scientific and native names of these plants are listed in Appendix 1. In more recent times they are known to produce sweet manioc and sugarcane. The dependence upon food crops in relation to game, fish, and wild food plants is difficult to gauge. The statements of missionaries, however, appear to indicate that cultivated crops do not provide a year-round food supply and may actually play a minor role as compared with dependence upon noncultivated resources.

Farming is done on the slopes of the "galeria" forests, where, as we have seen, they also do most of their hunting and collecting. The Waklításu band clears and cultivates a single field and, as we have said, lives in a single house while thus occupied. In the past the field (*haítu*) was cleared with a stone ax (*etúnsu*) and a wooden club (*hukwénisu*). Today steel axes and machetes are used, but the method of planting is still the same. The efficiency of steel tools over stone axes and wooden clubs is indicated by the statement that in the past when a new field had to be cleared the people had to work during most of the wet season in order to fell the trees, a task which they now perform in May and June.

Formerly the light undergrowth was pulled out by hand and the bushes and saplings were beaten down with the wooden club. The Nambicuara had a unique way of felling trees. Starting near the bottom of the slope, they cut all the small trees part way through, then selected a number of large trees as kingpins. When these large trees were felled they knocked down the smaller trees below them. This was continued until they had a circular clearing of the required size on the slope. Today the clearing is done with axes and knives,



but the method of felling is the same. All clearing has to be completed by the end of June to permit the felled trees to dry.

In late August, when the cicada begins to sing and the first thunder is heard, the Nambicuara return to undertake their planting activities. At a given signal, men with lighted bunches of dry grass set fire to dry trees and bushes all around the edges of the field. The rest of the people are concentrated at the river's edge at the bottom of the slope, and as animals, such as rats, lizards, and snakes, flee toward the water they kill them. After the fires have died down the people go through the field collecting grubs, insects, and whatever else that is edible.

Among the stumps and unburnt logs the Nambicuara hoe up hills about 3 feet in diameter into which they stick 6 or 7 pieces of last season's manioc stems, each about 10 inches long. These hills are made about 5 or 6 feet apart. Formerly they used a digging stick (*kadikádsu*) but today the metal hoe (*isakúlusu*) is used. Bitter manioc (*walídnsu*) is their most important crop.

After the rains have begun and the manioc is several inches high, they begin to plant maize (*kayátsu*) of which the Nambicuara have several varieties. Maize is planted between the manioc hills by making a hole in the ground with a digging stick into which 2 seeds are dropped. As the holes are about 6 inches deep, the seeds are not covered. Whether this is to protect the seeds from birds is not clear.

When the maize has grown tall enough to provide shade they plant beans (*kwá'su*), sweetpotatoes (*wisy*), and tobacco (*étsu*). The bean which the Nambicuara grow looks like a large red kidney bean and has a tough skin. Beans are planted one seed to a shallow hole and covered. Sweetpotatoes are planted by placing cuttings in shallow trenches near logs and stumps. When planting tobacco a man places a handful of seeds on a leaf, climbs onto a high stump, and blows the fine seeds so that they scatter over the field. They weed the field only once when the maize is about a foot or two in height. Cotton is planted in the field but urucú bushes and gourds are planted near the houses. After the planting is finished and the field is growing well the people leave on their continuous rounds of hunting, fishing, and collecting.

The Nambicuara method of processing manioc in comparison with that of the Camayurá is simple and crude. The following describes the method used today: Marciano's wife dug up a burden basket full of manioc from a field belonging to the Protestant Mission. She sat under a tree and peeled the tubers with an old butcher knife (formerly a piece of bamboo was used). She washed the peeled tubers and placed them in a calabash. She then took a grater made from a piece of kerosene box about 2 feet long and 6 inches wide to which an 18-inch strip of perforated tin was nailed. She placed one end of the grater in a larger copper basin (belonging to the mission) while the other end rested on the edge, and while steadying the grater with one hand she grated the tuber with the other. The tubers did not stand in water nor were they dipped in water during the process of grating.

After the tubers were grated she dipped out a calabash full of mash and began pressing it with her hands and pouring the juice into another calabash. After she had drained off as much juice as possible she picked up a handful of mash (*wiêneré*) and rolled it and squeezed it until no more juice could be expelled. This ball she placed in another calabash and continued making balls until the calabash was full. She then patted down the balls to form a round loaf about 10 inches in diameter and 4 inches thick, which she set out on the bare ground to dry in the sun. After several days in the sun these loaves get hard and dry and form the storable product (*kinokányere*) from which the edible cake *hi'inire* (also called *walídnsu*) is baked. The juice (*eyáuse*) which was left in the calabash she poured into a slight depression in the ground, and after the liquid had drained off she collected the thin film of starch flour (*akainisu*) along with some sand, rolled it into a ball, and placed it in hot ashes to bake. The lack of pottery vessels prevents the Nambicuara from saving and boiling the juice. They know, however, that the juice is valuable, and when they have cooking vessels they boil it to form a thick porridge.

When the Nambicuara wish to prepare a greater quantity of pulp they use a piece of bast for a press. This is a piece of embira bark about 3 feet long and 8 inches wide called *sáru*. A woman rolls a ball of pulp in the strip of bark and twists the bark until the pulp is dry. The balls are then

placed on a platform under which a fire is lighted. In this manner large quantities of *kinokányere* can be prepared in one day.

When a woman gets ready to bake a manioc cake she pushes the hot coals and burning wood to one side and pats down the hot bed of the fire with a flat piece of wood. She then breaks off pieces from a dried manioc loaf and crumbles them over the bed of the fire by rubbing them in her hands. When she has crumbled up enough dry manioc, she pats down the flour to form a round, flat cake about 10 inches in diameter and from 1 to 2 inches in thickness. She covers the cake first with hot ashes and then hot coals. After one-half hour she uncovers her oven to find a brown cake covered with ashes and cinders. This sour, dirty, gritty product in no way compares with the fine-textured, sweet *menyú* of the Camayurá, the meal for which is prepared by crushing the dry ball in a mortar, then sifted to remove the rough fibers, after which the flour is dampened and baked on a pottery baking plate. Sometimes the whole manioc loaf is placed in the fire, and as it bakes the Nambicuara begin to break off pieces from the outside. For ceremonial purposes they bake cakes about 2 feet in diameter.

Toward the end of the rains in April and May the Nambicuara return to their fields to enjoy the fresh garden products. The harvest is inaugurated with a harvest ceremony (*haikónak'idutsu*). Fresh maize, peanuts, and sweetpotatoes are roasted, manioc cakes are prepared, and, if possible, manioc juice is boiled to make chicha. These garden products, along with meat, supply the food for the feast, which lasts for several days. The sacred flutes (*wainrhu*) are played in the flute hut, the spirits of the ancestors are present, and food and drink are offered to them.

The subsistence activities of the Nambicuara are, thus, closely associated with the annual cycle of growth in which agriculture forms but a part. The dependence of the Nambicuara upon the wild products of the forest and plateau are much more complex than has been indicated. They supplied long lists of names of plants, insects, and animals for which no Portuguese names could be found. A full understanding of their economic dependence upon the environment would come only by someone following a band of Nambicuara throughout the year to observe the complete annual cycle of

subsistence activities. For instance, they say that they eat the blossoms of certain plants and a great number of grubs, larvae, and insects. A favorite dish is to crush in a mortar manioc cakes with boiled beans, broiled meat, ants, palm nuts, monkey and bird bones.

As an example of the variety of uses to which the Nambicuara can put a plant we can take the burití palm: (1) They eat the pulp surrounding the scaly covered nut. (2) They use the fibers from the new growth to make twine. (3) They use the tough, flexible cortex of the frond stalk for making baskets. (4) They fell the burití so that a certain variety of grub can collect and multiply in the starchy pith in the heart of the tree. The grubs or larvae they then eat uncooked. (5) The dried frond stalks are tied into bundles and used as floats for crossing rivers. In addition, the burití palm has male associations, for only men can prepare its products. When a male child dies a piece of burití fiber is left over his grave.

The Nambicuara make fire by the drill method. They cut two round pieces of dry stick about 18 inches in length and three-quarters of an inch in diameter from some bush that has a soft pithy center. The lower stick is split and into the flat side shallow notches are cut to hold the drill in place. The drilling stick is then inserted into the notch while the lower stick is held in place by the toes of the man as he squats over it. He then begins to twirl the stick between his palms, pressing downward. As his hands reach the bottom, he quickly brings them to the top and continues drilling until the pith in the lower stick loosens into small smouldering balls. These he places into a handful of dry burití fiber and begins to blow on them until the fiber ignites. About 2 minutes is all that is required to make a fire by this method.

#### MANUFACTURING

The material equipment of the Eastern Nambicuara is extremely simple. Many items, such as the conical trap for catching fish, the floats for crossing rivers, the loom for weaving arm bands, and the mortar and pestle for crushing food products are made for the occasion and are discarded when the task is completed or when the people move. The small grater and the few gourd vessels, small baskets, and twine, the woman carries



in her burden basket, whereas the modern axes, knives, and other tools, along with his ornaments, the man carries in a similar basket, or he straps this basket on the back of a boy while he walks in front of the file carrying his bow and arrows or gun ready to shoot whatever game is met along the way. Whenever they kill some animal or catch a few fish and feel hungry they stop and prepare a meal. During the dry season they are at home anywhere in their band territory, moving only when hunger spurs them on.

Today, of course, the Nambicuara have steel axes and knives. The heavy equipment of the Waklitisu band in 1949, consisted of three axes, two shotguns, and some half dozen hoes which were hidden near their permanent house. Each man had a butcher knife, but all men did not have bows and arrows. There did not appear to be any desire on the part of each man to possess these implements. So long as the band had a few of these objects everyone seemed to be satisfied. Cascudo, a widower when he arrived in Utiarity, did not possess a bow and arrow, nor a gun, nor an ax. By working for the Protestant missionaries he acquired an ax and when Marciano died he inherited his bow and arrows. After a few days, however, he had given the bow and arrows to a Brazilian in exchange for a felt hat.

Examining the hand tools which Julio used, the following articles were found: A chisel (*kwatíru*) made by inserting a piece of steel into a wooden handle wound with twine; a small bamboo knife (*alkúkwirikatu*); a hardwood drill (*hiskatu*), used with sand for perforating tucum nut shells in making beads; a piece of sandstone (*dáligisu*), used as a whetstone; a number of rough leaves of the lixeiro tree (*kle'énatu*), used as sandpaper; and a comb (*ha'alatu*). Each of Julio's three wives had a burden basket, a small square basket, and two or three gourd vessels of various sizes. A single wooden mortar and pestle did service for the whole band.

One of the most important implements of the Nambicuara is the bow, *húkisu*, made from the piuva (jacaranda-copaia) or the siriva palm (*Syagrus speciosa*). By far the most common is the bow made from piuva, ranging between 6 and 7 feet in length, flat on the inside and convex on the outside. One of the bows examined measured 2 meters and 14 cm. in length, 4 cm. in width, and 1.5 cm. in

thickness in the middle. This bow is made from the honey-colored heartwood of a small piuva tree. After cutting a piece of the required length the bow maker splits it by using two or three axes. He then trims off the outer layer of wood with an ax, shapes it with a knife, and polishes it with lixeiro leaves. The inner side of the bow is flat or slightly concave, depending upon how the wood splits. Shoulders are made at each end to hold the bowstring. The bow is made from green wood, no attempt being made to season it. The siriva bow is the same shape and is made in the same way but the black wood surrounding the center is used. The siriva bow is more common among the Western Nambicuara.

The bowstring (*halunwínisu*) is made from tucum fiber and is about one-eighth of an inch in thickness. The cord is much longer than required and the extra length is wound around the bow for about 6 inches just above the hand hold. The cord is wound from left to right, the running end being brought back over the previous turn to form a cross on the inside of the bow. The string is always smeared with urucú (*dúse*). As the bowstring wears out it is not removed but new lengths of tucum fiber are woven into the extra length.

The basis of the Eastern Nambicuara arrow is the jointless shaft (*alukwirikatu*), which appears to be cane (*Gadua* sp.). Before being made into an arrow the cane shaft is heated over a fire to harden it. Into this cane shaft, which is roughly three-eighths of an inch in diameter, a piuva foreshaft (*iháikatsutu*) is inserted for a distance of 4 or 5 inches, leaving about 20 inches protruding. The joint is wound with sipó vine for about 6 inches. To feather the arrow, a 10-inch macaw feather (*akinéntsú*) is split and the halves are laid parallel to one another on opposite sides of the butt end of the shaft. The feathers are lashed to the shaft with cotton twine, the lashings being about an inch apart. Although the feathers are laid straight along the shaft, they assume a propellerlike pitch which gives the arrow its revolving motion when in flight. The lashings are covered with beeswax. The butt has a V-notch to hold the bowstring, which is again tightly wound with waxed cotton twine. By attaching various parts to the end of the foreshaft, four different kinds of arrows about 5 feet long are made.

(1) The *hányesu*, an arrow which is used for shooting monkeys and large birds, is made by lashing an inch-long slender barb of siriva palm or piuva about an inch back from the sharpened point of the foreshaft.

(2) The *saláitsu*, or fish arrow, is made by lashing four slender points of wood about 2 inches long to the end of the foreshaft. This arrow need not be feathered. Today wire is sometimes substituted for the wooden points.

(3) The *dúnkisu*, or blunt bird arrow, used for shooting small birds, has a separate piuva foreshaft, the end of which forms a rounded flat surface about an inch in diameter.

(4) The *hóptisu*, or big game arrow, has a broad split bamboo point about 12 inches in length which is lashed to the foreshaft. As the bamboo point is slightly grooved along the center, the foreshaft lies along the groove permitting it to be lashed firmly to the tapered sides of the point. Formerly curare poison was smeared along the groove. This was also the arrow used in war.

Sometimes a bamboo point is serrated on one or both sides. In former times, this arrowhead was poisoned with curare. It was attached loosely to the shaft so that when it struck an animal it became detached from the shaft. This arrow was used against big game like the jaguar, tapir, deer, and against human enemies.

The bow is held in a vertical position when shooting; the arrow is held with the thumb and forefinger while the middle and ring finger pull the bowstring, with the arrow resting against the hand side of the bow.

Cordage is made from the fibers of the tucum and burití palms and from cotton. The tucum palm (*Astrocaryum tucuma*), *hatátsu*, provides not only fiber but the hard shell of the nut is used for making the black, round, flat necklace washers, and the thorns from the trunk are used as spikes in the manioc grater. Tucum twine which is a little stronger than burití twine is used for bowstrings, for stringing beads, and for many other purposes. When a man needs tucum twine he sends his wife to gather the palm leaves. As the young trees grow in clumps, it is a simple matter for the woman to cut off a number of fronds. The woman then takes a long slender leaf, bends it double in the middle so that the woody fiber breaks, then doubles it back and pulls downward

on one half while holding the other, thus stripping the fine fiber from the body of the leaf. She then turns the leaf over and strips the other half. Later she picks off whatever bits of green skin that adheres to the fibers and twirls one end between her fingers to keep the fibers together. From each leaf, therefore, she gets a pale green whip of fiber which forms the raw material for cordage making. A number of these whips are wrapped in embira, the bundle being known as *dáidjusu*, and stored away for future use.

When a man wishes to make cordage he begins to add these whips to existing bits of twine or cord. I never saw a man making a completely new cord. The end of an old piece of cordage is unraveled and three whips are joined to it at intervals of several inches and rolled together on the thigh, the motion being toward the body. This stroke rolls up the fibers into three tight strands. On the downward stroke the three separate strands are "laid up" or rolled together to form the cord. Three new whips are added and the process is repeated until the cord is of the desired length. If the man wishes to make finer cord he separates each whip into a number of parts.

The making of cordage from burití (*Mauritia vinifera*), *yélasu*, as has been mentioned, is man's work. The man finds a young burití palm and from the top of it cuts down the shoot which encloses the three leafstalks. This growing part is a tapered rod about 5 feet long and triangular in shape. When twisted this rod cracks open revealing countless fine strands covered with a green skin, each strand having a hard embryonic leaf stem running through the center. First the man peels off the green outer skin and then pulls out the embryonic leaf stem. What he has left is a hank of lemon-colored, soft, grasslike ribbons the length of the original rod and about one-half of an inch in width. These ribbons he coils and places in a pot and boils for about 20 minutes so that the starchy material is loosened. In former times the hank was placed in the hot sand under the fire and sprinkled with water. When the coil is cool enough to handle the man opens it out and begins to rub it between his hands just as does a woman washing a strip of cloth, periodically dipping it into the warm water. As he rubs, the hank gets quite sticky as the starchy material



breaks down. After one-half hour the starchy material is washed out and the ribbons begin to separate into fine strands of fiber. The hank is then shaken out and hung up to dry. When of good quality, that is, when the rod is of the right age, the fibers dry out a pale cream color. While the man is occupied at this task the girls make temporary necklaces from the green outer skin and the boys use the thin central stems as arrows for their small bows. These dried-out hanks are a favorite decoration of the Nambicuara when painted with horizontal bands of urucú. They can then be suspended from the neck and allowed to hang down the back, or pieces are attached to the arm bands, leg bands, and in front to the belt.

Cotton twine is used for making arrows, stringing beads, weaving arm bands and the narrow shoulder straps which women use for carrying young children. From the cotton bush (*kúndsu*) the woman picks the bolls (*kúnkisu*) to make cotton twine (*kúndlisu*). As the making of burití twine is a man's task, so the making of cotton twine is purely a woman's task. After picking the seeds from the bolls she spreads the cotton into flat disks and then into circles. Next she breaks the circles and joins them to form a long rope about an inch in diameter. This rope she winds around her arm, twists the end of it with her fingers, and fastens it to the top of a spindle (*waníkisu*). With a twirl of her fingers she sets it spinning and lets it drop, plucking out the cotton as it is spun. Later she unties the string and fastens it near the whorl and then by spinning the spindle on the ground the twine is wrapped around it. This process is repeated until the cotton rope is used up.

The men do the weaving on a true but very makeshift loom. Two forked sticks, roughly a yard long, are thrust into the ground about 2 feet apart and at an angle. One cross bar rests in the forks while another is fastened on near the ground. The warp is wound around these cross bars. The heddle, shuttle, and sword are used in weaving the narrow material. It seems very likely that this type of loom was taken over from the Arawakan Paressí.

The bast strap or band (*sa'am*) is made from embira and is used for pressing manioc pulp, for carrying children or baskets, and, when cut into strips, is used for tying up bundles.

## ORNAMENTATION

The Eastern Nambicuara also make a wide assortment of ornaments from tucum nuts, shell, teeth, and bamboo. From the shell of the tucum nut they make black washers which are strung for necklaces or ear ornaments. The irregular-shaped washers are first ground down to an almost paper-like thinness on a piece of sandstone. They are then strung tightly on a string and the maker begins to rub them against a stone in order to make them circular. He continues rubbing until the washers are no more than a quarter of an inch in diameter, for the smaller the washer the more highly the necklace is valued, as this process takes many weeks.

The ear lobes of both men and women are perforated so that tucum shell washers, beads on a string, and triangular pieces of shell can be suspended from them.

The septum of the nose and the upper lips of men are perforated. Through the hole in the septum they force a slender piece of bamboo about 2 inches in length. These adornments give a peculiar expression to the face, particularly when the man is speaking. Julio was especially proud of these ornaments and claimed that white men were just like women because they did not wear them. On special occasions a blue macaw feather about 10 inches long with a bunch of red feathers near the lower end is worn in the nose. Only shamans wear a hat made from jaguar skin.

The most popular necklace is made from tucum washers and is worn by men, women, and children. Short lengths of bamboo, monkey teeth, jaguar teeth and claws are also used for making necklaces for men. If very long, any necklace can be worn over one shoulder and under the arm. A special type of necklace for men is made by suspending black mutúm feathers from a string alternating with lengths of bamboo. Generally the feathers also alternate, some being long and some short. A rare but highly valued necklace is made from the shiny black horns of a large beetle.

Arm bands about an inch in width made of woven cotton are worn above the biceps by both men and women. From these, men suspend tassels of burití fiber. This fiber is also worn around the wrists and ankles. Wrist bands are also made for women from the tail of the armadillo.

Around the waist both men and women wear a burití cord; if possible, this string is strung with glass store beads. In addition, men sometimes suspend a lenth of burití fiber from the front of the belt.

Men paint their faces with urucú, drawing a band from each side of the forehead down to the chin, another band across the eyes and bridge of the nose, and then a band from under each eye across the cheeks. On the body they draw two stripes, starting from the abdomen up to the nipples and then over to each shoulder. The arms and legs are dotted with red or black spots. The hair is seldom smeared with urucú.

### SOCIAL ORGANIZATION

(See chart 13)

The names of the Eastern Nambicuara bands appear to be derived from characteristics peculiar to the band territory. The Waklítisu are cayman people for there are many caymans (*waklisu*) in their territory. The Elótasu are open plains people, for they live on the open plain (*toku*) of the upper Camararé River. The Kitánhlu get their name from a small fruit called *tantu*. The Chiwáisu are bee people from the word *waisu*, bee. The Hégndisu are burití fruit (*héeru*) people. Although these bands are not politically united under a single chief, and sometimes even resort to open conflict, they consider themselves a single people, or as Julio phrased it, "We can speak with one another and we came from the same hole in the stone mountain."

The origin myth of the Eastern Nambicuara, as it is told among the Waklítisu band, can be summarized as follows:

Before the Nambicuara came there were only animals, birds, plants, and beings who could change from animal and bird to human form. At that time the Nambicuara were inside a stone mountain called *yaháindurukatsu*, which is situated north of the telegraph line near Campos Novos (roughly in the center of the territory now occupied by the Eastern Nambicuara). One day the monkeys heard people speaking inside the mountain and went to tell *okliháitlisu* who changed himself into a black and white woodpecker and flew with all his strength against the mountain. When the mountain broke some were killed and some injured but many came out alive. The ghosts of the dead people remained around the mountain where they still are and where all Nambicuara go after they die. The injured people *okliháitlisu* sent into the bush, but the people who were sound of body he put into good clean places and gave them the piuva bow and taught them how

to grow manioc and sweetpotatoes. He also gave them the flute (*wáinru*), and taught them how to sing and dance. *Okliháitlisu* is thus the culture hero of the Nambicuara. In human form he looks like a Nambicuara Indian, wears ornaments in his ears, nose, and upper lip and paints himself with urucú. Yet today people no longer see *okliháitlisu*, for he has gone away. They do not have rituals connected with him, nor do the shamans solicit his aid. But the stone mountain from which the Nambicuara came is still recognized as the place of the dead. On ceremonial occasions the ghosts of the ancestors come to the encampments and villages from the mountain, returning after they have been given food.

Although every band has a leader or chief it is not quite certain whether these leaders get their positions through succession or by personal strength and prestige. Julio claimed that he is headman because his father was a headman, but the other members of the Waklítisu band claim that the strongest man is always the leader by common agreement. The Nambicuara appear to value two qualities in a man—"a strong body" and "a strong mouth." The chief is like a tapir (*alúnsu*) which is the strongest of the animals; thus, a chief is called *alunsáidnara*. A shaman gains power by talking or by having "a strong mouth," as the Nambicuara say. The strongest man is one who combines these qualities and is at once a strong man and shaman—he becomes an important chief.

The survival of the band, the Nambicuara believe, depends upon the *alunsáidnara*. He is the hunt leader, the head farmer, the one who organizes trade between the bands, the ceremonial head, the war leader, and the settler of disputes. Every successful chief is supposed to have four wives but otherwise has nothing to distinguish him from the rest of the tribesmen.

Relationships between the bands of the Eastern Nambicuara are characterized by intermarriage, trade, occasional joint ceremonies, and wife stealing and consequent armed conflicts. Intermarriage occurs when cross cousins are not available for marriage within the band. The Chiwáisu and Hégndisu obtain pots from the Western Nambicuara in exchange for wax, feather ornaments, beads, and bows and arrows. These pots they in turn exchange with the Eastern Nambicuara bands for knives, axes, and tin cans.

When one band wants to meet another in order to exchange goods the approach is made in a very formal manner. The approaching band stops



several hundred yards off and messengers are sent out to arrange a meeting. When agreement is reached the visiting band enters the camp, the visiting chief kneels on one knee and holding his bow and arrows above his head with his right hand he makes a speech extolling the hosts and their goods and depreciating the things which his band has brought. The host then makes a similar speech, and trading begins.

Important items are traded by the two chiefs representing their respective bands, while small items can be exchanged by individual owners. In all cases, however, the technique of trading is the same. If an individual wants an object he extolls it by saying how fine it is. If a man values an object and wants much in exchange for it, instead of saying that it is very valuable he says that it is no good, thus showing his desire to keep it. "This ax is no good, it is very old, it is very dull," he will say, referring to his ax which the other wants. This argument is carried on in an angry tone of voice until a settlement is reached. When agreement has been reached each snatches the object out of the other's hand. If a man has bartered a necklace, instead of taking it off and handing it over, the other person must take it off with a show of force. Disputes, often leading to fights, occur when one party is a little premature and snatches the object before the other has finished arguing. The term "boca forte" (strong mouth) applies particularly to trading, for a man with a strong mouth gets what he wants and convinces the other that he, too, has made a good bargain. This method of trading contrasts sharply with that practiced among the Upper Xingú tribes where each party places a pile of goods opposite the article he wants, usually without saying a word. If agreement is not reached, each one eventually withdraws his goods.

After a satisfactory exchange of goods the two bands go hunting and prepare a quantity of food and dance as long as the food lasts. During these meetings marriages are sometimes arranged, but more often, when leaving, some strong man will try to steal the wife of some other man. If a fight should occur in which one man is killed the winner will take not only his wife or wives but his children and property as well.

Rev. L. W. Buckman gave the following account which reveals something of the tension between

the bands. In 1937, the Kitánhlu band met a small group of Chiwáisu out hunting and attempted to trade with them. As the Chiwáisu were the smaller group, the Kitánhlu evidently tried to rob them. In the fight several Chiwáisu were killed. These bands did not meet again until 1941, but the Chiwáisu prowled around the Kitánhlu camp stealing what they could and trying to revenge their fallen comrades. In 1941, both bands happened to meet in Campos Novos, and the old quarrel was renewed. In the Chiwáisu camp there was a child which had been born to a Kitánhlu woman married to a Chiwáisu. A Kitánhlu took the child away by force saying that it belonged to his band. The Chiwáisu retaliated by shooting down a Kitánhlu. A fight followed in which the Chiwáisu were driven out after losing several of their band. For several years the Chiwáisu remained away and were attacked by the Saláunsu, a wild tribe living to the north of the Nambicuara. In the last few years, a temporary peace has been arranged by the Chiwáisu bringing presents of wax and honey to the Kitánhlu.

Except at telegraph stations, mission stations, and at the two Indian Posts, the Nambicuara have few contacts with their neighbors, the Paressí and Iranxe. The Paressí consider the Nambicuara as their inferiors, and, as far as is known, the two peoples do not intermarry. The Iranxe hold themselves aloof from both tribes.

The efforts of the Serviço de Proteção aos Índios to improve the lot of the Nambicuara have not been very successful. Part of this lack of success is, no doubt, due to the poor agricultural possibilities in the region. The Tolosa Post is situated in a barren region where it is difficult to grow sufficient food to maintain more than two or three families. The Nambicuara visit Tolosa, but after the food supply is consumed they move on. The other factor which makes it difficult to settle the Nambicuara in permanent villages is that they are hunters and shifting agriculturists. Lack of good agricultural land does not altogether explain this nomadic pattern of existence. Like the Caduveo who have excellent farming land the Nambicuara persist in continuing their traditional form of economy.

In contrast to the Paressí, who have become satisfactory employees of telegraph stations, mining camps, and mission stations, the Nambicuara

only work for the white man when they want an ax, a knife, a gun, or some article of clothing, and once they obtain what they want they wander off. Miners particularly are bitter about the fact that the Nambicuara are unreliable workers.

Missionary activity, which has been carried on intensively by both Protestants and Catholics for about 20 years, has been singularly unsuccessful in Christianizing the Nambicuara. The Jesuit priests informed me that only those individuals who have been taken to Diamantino as children and kept there can be said to understand the rudiments of Christianity. The hope is that eventually these individuals can be brought back to the tribe and through their influence their children will be raised as Christians. The Protestants tell the same story. The Indians remain around the mission stations, participate in prayer meetings, and perform little tasks for which they are compensated but they soon become bored and wander off. The Rev. L. W. Buckman told me that he raised a Nambicuara boy at the station and believed that he would remain, but one day the boy got married, left with his wife, and took up the old wandering pagan form of life. None of the Waklitisu band are considered Christians. When Marciano died a few days before I left he was buried according to Indian custom, both Protestant and Catholic missionaries participating in the burial as onlookers. Among this band which has had as much missionary contact as any, there was not a single individual who could speak or read Portuguese. Some of the men, as has been mentioned, used a form of pidgin Portuguese as a means of communicating with their white neighbors.

The attitude of the Nambicuara toward the white man is not only one of suspicion and sullen resentment, but one of disdain. They call white people "civilizados" or sometimes "bean eaters." A Nambicuara feels insulted if these terms are applied to himself. He openly boasts of being a "bugre," a slang term widely applied to Indians in Brazil which signifies a sodomite or heathen. While all other Indians that I have met in Mato Grosso objected to this term when it was applied to them, the Nambicuara always use it when talking about themselves. Julio informed me that the Nambicuara always get sick when they visit white people. The missionaries confirmed this fact but added that the Nambicuara have now become

dependent upon the whites for metal tools, guns and ammunition, and feel it necessary to visit white settlements. The Nambicuara are not above visiting white men for treatment of injuries and cases of severe illness.

The interband relationships of the Eastern Nambicuara, although characterized by tensions and periodic open conflicts, are based on a recognition of common origin, common speech, and a degree of intercourse through trade, marriage, and the performance of dances in common. The relations with the so-called wild tribes to the north, on the other hand, are based on war, not just on raiding for loot and women, but on a war of extermination. Although the bands south of the telegraph line no longer participate in war, the bands north of the line still fight on occasion with their enemies which they call the Saláunsu and which the whites call the Beijo de Pau.

When preparing for a war the chief of the band takes the men into the woods and tells them that there are bad people to the north which they must kill. Then after singing a war song they set about making many arrows and war clubs. The night before the attack they camp near the village of the enemy. The men paint their bodies with the sap of some latex tree and their faces with urucú and charcoal. They then take leaves and stuff them into any holes in the ground or in trees around their camp. After all the holes are stopped up, they take the skin of an anteater, the skin of a toad, and the leaves of a tree, which are used in preventing rain, and burn them. The stopping of the holes is believed to prevent the enemy from hearing them, the smoke is to blind the enemy's *anúnsu* and, also, to make the enemy sleep soundly. The chief remains at this spot and sings all night with the shamans. At dawn the young men approach the huts of the enemy, stand in the doorways and shout, and when the occupants awaken they are shot down or clubbed. No one is spared. They then take whatever they can, burn the houses, and return to the chief and his singing shamans where the loot is distributed among the warriors.

The internal organization of the band is based upon kinship and is perpetuated through cross-cousin marriage. One belongs to the band of his or her mother. Julio explained that when the daughter of the wife whom he abducted from the Elótasu reaches puberty she will return to the



Elótasu band. This is the custom among all the Eastern Nambicuara bands.

The kinship terminology belongs to the bifurcate merging type. The term *tayántasu* (grandfather) and the term *quataháinisú* (grandmother) are extended to the brothers and sisters of one's grandparents. The term *awínisu* (father) and the term *ahakínisu* (mother) are extended to father's brother and mother's sister, respectively. Father's sister is termed *aháinusú* and mother's brother *asúnusú*. A man calls his older brother *akandínusú*, his younger brother *dawáidínisu*, and his sisters *awádnasú*, these terms being extended to parallel cousins. The terms for son (*akiráru*) and daughter (*akenêru*) are extended to the children of a man whom ego calls brother. The terms for sister's son and daughter are *asuétu* and *asintu*, respectively, these terms being extended to the children of anyone whom ego calls sister. The term for male cross cousin is *asúkisu* and that for female cross cousin, *dazésu*. There is just one term for grandchildren, *quatasáiserawa*.

The only affinal kinship terms which we could obtain were the terms wife (*azésu*) which bears a close relationship to female cross cousin; husband (*amezdísu*); and the terms for father-in-law (*asúnusú*), and mother-in-law (*aháinusú*), which are identical to the terms for mother's brother and father's sister. Whether women employ different kinship terms was not ascertained owing to the fact that the women refused to discuss the matter and the male informants persisted in going to sleep when the subject was broached.

The kinship terminology supports the statement made by the Nambicuara that cross-cousin marriage is preferred. Excepting one Elótasu woman all the wives in Julio's band were Waklítisu and cross cousins of their husbands. At the death of the husband the wife and children pass to the deceased husband's brother. Women sometimes marry their mother's brothers. Residence is patrilocal although when marrying a woman from another band, the man sometimes remains with his wife's band for a while. Band membership, as has been stated, is determined by matrilineal descent.

The powers of the chief are limited to leadership in such activities as hunting, planting, trade, and ceremonies. Raids, although organized by the chief, are not led by him. The chief admon-

ishes quarrelsome individuals but appears to have no powers of coercion. The Waklítisu claim that individuals quarrel but they do not fight among themselves nor do they remember any cases of murder. Unwanted individuals are exiled by common agreement. Houses, fields, and some implements are common property, and food is shared among the members of the band. Axes, machetes, and knives, although owned by individuals are freely used by other members. At death, privately owned tools pass to a man's sons or to his brother. The bow is customarily broken and left on the grave. Even these rules are not strictly adhered to, for when a man becomes seriously ill other men begin to help themselves to his property and the one with the "strongest mouth" gets the most. If the man recovers he cannot reclaim his things but must set about accumulating a new supply.

The wife and the children are under the strict control of the husband. Although boys must obey their fathers they owe no special obedience to their mothers. Boys sometimes throw stones and sticks at their mothers and the old women; the older men not only laugh but even encourage this disobedience. The bond between brothers is very close. On occasion they share each other's wives. No particular respect is paid to in-laws.

## RELIGIOUS BELIEFS AND PRACTICES

According to the Waklítisu the spirits are the source of all danger, misfortune, sickness, and death. The ghosts of the dead (*ayánkadísu*), bring sickness unless offerings of food are made to them. The ghosts of dead shamans (*anúnsu*), belonging to other bands bring thunderstorms which destroy gardens and make hunting difficult. In addition to the ghosts, there is *tauptú*, the hawk of death who lives in the sky, and *ulurú*, the evil armadillo who lives under the ground and wants to destroy the villages and camps of the Nambicuara.

*Tauptú* is an enormous hawk with huge wings, tail, and claws, who sits in a tree made of human bones. This tree (*lúlukatsu*) is situated on the shore of a shallow lake in the sky. Shooting stars are caused by *tauptú* defecating at night. A small red bird (*dinínúwa*), who lives with *tauptú*, urinates into the lake and when it fills up the urine overflows and comes down in the form of rain.

*Tauptú* does not cause illness, but when people get sick he begins to eat away the flesh and finally kills them and eventually takes their bones to his abode in the sky. The missionaries told me that when the first airplane appeared in Nambicuara territory the Indians ran into the forest and hid because they believed the airplane was *tauptú*. Shamans sometimes visit the land of *tauptú* by riding up to the sky on the back of *urutai*, the night hawk or goat sucker. Julio claimed that his father-in-law, who was a powerful shaman, had visited the realm of *tauptú* while in a trance.

The Waklítisu fear most of all the spirit armadillo called *ulurú*. When someone sees bits of manioc cake and charcoal floating on the river near the village, he comes back and tells the shaman, who then goes to examine the signs. If the shaman decides that it is *ulurú*, immediate action must be taken to save the world from destruction. The women and children shut themselves in their huts while the men take their wooden sword clubs (*hulúkisu*) and go to the bank of the river. The shaman then digs a deep hole in the bank, into which he is lowered with a rope. When he has grasped *ulurú* by the tail he signals the men on the surface to pull him out. The shaman remains at the mouth of the hole with his arm thrust in, holding *ulurú* by the tail while with his other hand he marks points on the ground which are directly over the head, heart, and stomach of *ulurú*. One by one the men thrust their sword clubs into the ground at the places marked by the shaman. As they push the blades in they twist them to make sure that they kill *ulurú*. After the spirit armadillo has been killed, the men go back to the village leaving the shaman alone with the dead *ulurú*. The shaman then cuts up the spirit armadillo, washes the pieces in the river, and begins to sing. When the ghosts of the dead Nambicuara hear the song they come and eat the pieces prepared by the shaman, after which they go away happy because the Nambicuara have been saved.

The Waklítisu say that if they should ever fail to kill *ulurú*, a terrific storm would appear followed by an earthquake, for when *ulurú* gets under the village he will turn the world upside down, *tauptú* will fall down from the sky, and the Nambicuara will be buried again. In short, they will go back

under the ground from where *oklihátłisu*, the culture hero, once released them. They add that they expect this to happen some day.

The man who is responsible for guarding the band against evil spirits is the shaman (*waníngi-disu*). In this task he is assisted by the ghosts of dead shamans of his own band. The spirit or ghost of a dead shaman is known as *anúnsu* and is sharply distinguished from the ghosts of non-shamans (*ayánkadisú*). The *anúnsu* of other bands, however, are considered evil for they bring thunderstorms. When speaking about shamans and shaman spirits in Portuguese, the Nambicuara refer to both as "trovão" (thunder). This has led many observers to the conclusion that the Nambicuara believe in a thunder spirit. Among the Waklítisu, at least, "trovão" or thunder is nothing more than a shaman or a shaman spirit. Actual thunder, which is caused by a shaman spirit is called *tlídítu*. A shaman spirit may also enter the body of a jaguar (*yenáru*), and cause harm to people.

The Nambicuara do not like heavy and prolonged rainstorms, for they say that the winds blow down their houses, the lightning sometimes kills people, and the rains wash away the tracks so that they and their dogs have difficulty in following game. To pacify the evil *anúnsu*, who has caused the storm, the shaman makes a cigar-shaped bundle (*yakúdenánsu*) out of certain dry leaves, which he ties with cotton twine, leaving long tails at each end. When he wants to stop the rain he lights one end of the bundle, and as it begins to smoke he waves it in the direction of the storm, telling the rain to go away. "Go away, go away, don't be angry at me," he says as he waves the bundle four times. If this does not stop the rain the shaman takes the sword club (*halúnkisu*), which appears to have magical powers, and cuts the rain. If the rain still persists, he lights three smudges made by mixing "para toda" leaves with the *yakúdenánsu* leaves. When the smoke rises from the smudges he takes a burning brand and waves it against the storm telling it to stop.

The shamans of one band also practice sorcery against individuals in another band by asking their *anúnsu* to inject objects into their bodies. When a shaman wishes to inject an object into his enemy he retires into a special hut (*sihádensu*) and



by singing calls his *anúnsu*, who eventually comes up out of the ground in front of him. The *anúnsu* may be in the form of a bird or a jaguar, but is very small in size. The shaman wears a hat made from a jaguar skin and a necklace made from jaguar claws and teeth. The shaman offers the hat and the necklace to his *anúnsu* if he will do his bidding. If the *anúnsu* is satisfied with the singing and the decorations he will carry out the shaman's orders. The procedure followed in curing an individual who has been made ill by sorcery is much the same. The shaman calls his *anúnsu* by singing and asks that he help him draw out the object. The *anúnsu* enters the shaman, who then sucks out the dangerous object. In mild cases the shaman draws out bamboo slivers, but in cases of severe illness he draws out the bones of fish or the entrails of birds.

The ghosts of the dead (*ayánkadisú*) who live around the stone mountain from which the Nambicuara came, periodically come to the villages and camps asking for food. They are not dangerous if they are well-treated. When the shaman says that the *ayánkadisú* are around, the people prepare manioc cakes, roast ears of maize, and broil meat. They then gather around the shaman and sing together with the ghosts. The shaman thanks the ghosts for their singing and they finally go away. If the ghosts are dissatisfied with the offerings and the singing they become angry and make the children ill. To cure the children, a more elaborate feast has to be prepared for the ghosts.

In every case, contact with the ghosts of the dead or with the spirits of dead shamans is made through singing. The Waklítisu do not use tobacco, drums, or rattles to communicate with the supernatural. One becomes a shaman when he hears the song of an *anúnsu*, which he later uses whenever he wishes to contact his spirit helper. Everyone in the band appears to know the songs which bring the *ayánkadisú*. Shamans practice continence before important rites, for if the *anúnsu* observe sexual intercourse they become angry and take away all the cotton from the bushes.

In addition to treating illness through shamanistic practices, the Nambicuara resort to more practical methods. They brew herbs, the juice of which is later poured over the head or stomach of a

patient. The juice of a certain plant is put into the cavities of teeth to stop toothache. The juice of boiled roots and leaves are taken internally for stomach disorders. One day I observed a woman pressing her foot over her husband's forehead as he lay on the ground. The heel was placed over the eye and she exerted considerable pressure. She was doing this to cure her husband's headache. These nonmagical practices are known to everyone. Some herbal medicines, however, are known only to the shamans and are used under the directions of the *anúnsu*.

The sacred flutes (*wáinrhu*) are associated with *okliháitlisu*, the culture hero, agriculture, and chieftainship. As these flutes are similar in appearance to the sacred flutes of the Paressí, among whom they have great significance, it is possible that the Nambicuara obtained them originally from the Paressí. The flutes are about 2 feet long with four holes at the lower end and are made from a jointless piece of bamboo. When the band settles down near their manioc fields they build a special hut for the flutes, but when they are wandering around, the flutes are hidden in the woods. Women are not permitted to see the flutes, and if one should accidentally see them her stomach would swell and she would become ill. But what appears more important is the fact that the flutes poison people who do not treat them well. Yet, as only the chief and the head shamans play them this would mean that the flutes are the symbols of authority representing the men in whom power is invested. The flutes, four of which should be in every band, do not represent a spirit but appear to be more like fetishes. Boiled manioc juice is poured into them and they are offered maize and broiled meat.

The *wáinrhu* are played after the fields have been planted and again at harvest time. After planting, the men gather into the flute hut and play the flutes and sing the *weiyánsu*. The ghosts of the dead participate and, along with the flutes, are offered food and drink. At harvest time another ceremony called *haikánakídutsu* is performed at night during which the flutes are played and special songs are sung. The following day the whole band participates in a dance. The ghosts also take part in this ceremony.

In addition to the *wáinrhu* flutes, the Nambicuara have a smaller four-stop bamboo flute called

*kadinsu*, the nose flute, *maitétansu*, and the five-tube panpipe, *dútu*. The nose flute which is about 4 inches in diameter is made by sticking two round pieces of gourd together with rosin. Three holes are made on one side, two holes providing finger stops, while air from one nostril is blown across the other. These flutes do not appear to have any ritual significance.

In reviewing the religious symbolism of the Nambicuara it appears that the following conclusions can be drawn. The *okliháitlisu* myth explains the origin of the Eastern Nambicuara and their rights to the territory which they now occupy. *Tauptú*, although not the cause of illness, explains why people die. *Tauptú* and *dih-nínwá* also account for the existence of shooting stars and the presence of rain. *Ulurú* appears to represent the ever-present forces of destruction inherent in the physical environment. Within the framework of these ultimate forces the Nambicuara carry on their struggle for existence assisted by and opposed by the members of their own kind. The security of the band depends upon the close cooperation of the kinsmen acting under the guidance of the chief. The *wáinrhu* flutes provide a supernatural sanction for the powers of the chief and thus help in enforcing and maintaining band solidarity. The flutes, furthermore, are a symbol of the common ancestry of the Eastern Nambicuara in that they relate the bands to the culture hero. The ghosts of the ancestors (*ayánkadisu*), like the living members of the band, must be well-treated in order to avoid danger to children and the perpetuation of the band.

But actual day-to-day danger to the individual comes from the members of other bands. Disputes over women and quarrels arising from the exchange of goods, as we have seen, lead to bloodshed and death. In the ultimate analysis each band defends itself as a sovereign unit by force. The danger arising from the constant tension and suspicion between the bands is symbolized by the *anúnsu* who bring illness, who create the storms which destroy the houses and fields, and who threaten the band with starvation by making hunting difficult. As direct attack by other bands is met with the physical forces of the band, so spiritual attack by the *anúnsu* of other bands is met by the assistance of one's own *anúnsu*. They help the shamans to draw out the evil objects

which cause sickness, they have given the magical herbs whose smoke blinds the dangerous *anúnsu*, and the techniques which will drive away the storms. Thus the shaman operating on a symbolic level continues the struggle for survival which has been defined for the Nambicuara by the nature of their adjustment to their physical environment and their relationships to one another.

## THE LIFE CYCLE

### BIRTH

The Nambicuara recognize sexual intercourse (*winsúenditsu*) as the cause of pregnancy (*halá-jitsu*). This act takes place in the woods while the husband and wife are out hunting or collecting, for it is considered improper to have sexual intercourse in public, even at night around the common camp fire. If a shaman should see a couple in sexual embrace while practicing his rites it would spoil his power. Although shamans use a special hut when calling their *anúnsu* there is always a chance that they may see a couple in the sexual act, so every effort must be made to avoid this danger. Shamans themselves abstain from sexual intercourse for 2 or 3 days before getting in contact with the spirits.

There appear to be no food taboos surrounding pregnancy among the Waklítisu. The husband continues hunting and collecting as usual, but he must avoid working too hard in the field for fear of causing his wife to abort. Women do not practice abortion, and the Nambicuara did not mention any medicines used for this purpose. Honey is considered conducive to sexual vigor and is used by young couples. Childless marriages are attributed to sterility in women, and a man may abandon his wife for this reason.

Birth takes place in the house, or in the camp if the family is out hunting. Just before expecting the birth of a child the expectant mother drinks the juice of certain herbs which are believed to facilitate birth. The husband and two older women assist in the delivery. The woman kneels on the ground and is supported by her husband. The umbilical cord is tied with a certain vine and then cut with a bamboo sliver. Among the Kitánrhu it is bitten off by one of the midwives. The placenta is buried at the place of birth and when the umbilical cord dries and falls off, it, too,



is buried in the camp. The child is bathed, and tiny washers made of tucum nut hull are placed on its ear lobes. The washer or ring is cut on an angle so that the two points eventually press through the lobe creating a hole. As the child grows, new washers are added. After a few weeks the child is given a beaded necklace, but it is not named, being known only as the child of so-and-so until puberty, when it receives a name. The Wakiítisu appear to have no avoidances following the birth of a child, although the Kitánrhu are said to practice a modified form of couvade. Twins are accepted with satisfaction. Illegitimate children are likewise accepted and are cared for by the girl's parents until she marries. No stigma appears to be attached to an unmarried mother; however, this attitude may be a recent development. Crippled or malformed babies are not killed, but usually die shortly after birth.

Children are nursed until they are 2 or 3 years old or until another child is born. Women in the band assist one another in nursing and taking care of the infants. If a woman should have two small infants, another woman who has lost her child will nurse one of them. Small children are carried on the hip of the mother, sitting on a strap which passes over the opposite shoulder of the mother. This strap which is made from embira bark or woven cotton is about 4 inches in width. Women evidently are accustomed to carrying heavy loads, for on many occasions the tiny women were observed carrying not only their child but also a huge burden basket full of firewood. When the child gets a few teeth it begins to chew on a piece of broiled meat. One morning while Kaoro and I were debating what to do with a rat which we had caught in a box trap the night before, neither of us having the courage to put our hand in the box, one of the missionaries suggested we give it to the Nambicuara. Kaoro then carried the box over to Julio's camp and gave it to one of his wives. Without any hesitation the woman put her hand in the box, pulled out the rat, banged its head on the box, and threw it on the coals of her fire. After the hair had been partially singed off she pulled it out, cut off its tail with her thumb nail, and gave it to her cowife's baby, who began sucking on it as if it had been a piece of candy. Then with her thumb

nail she opened the rat and threw the viscera and the rat on the coals. Within 15 minutes that rat was eaten, entrails and all, while Kaoro and I looked on in a state of horrified fascination. Children thus begin by eating broiled meat and fish; pieces of sour, gritty manioc cake are given to them at a more advanced age.

#### PUBERTY

When a boy reaches the age of 14 or 15 he has his upper lip and the septum of his nose pierced with a sharpened fibula of a monkey ("macacoprego"). One man holds the boy's arms, another his head, while an older male relative performs the piercing. Small plugs of bamboo are then placed in the holes. The following night the shaman leads the band in singing and dancing. Food is prepared in large quantities and offerings are made to the ghosts who are believed to be present at the ceremony. The boy is now given a name which he will keep throughout his life. If the boy's father is dead he will use his father's name. If the father is alive he will use the name of some dead member in his grandfather's generation. In this way names are passed from one generation to another. An important part of the boy's puberty ceremony is the ritual beating administered by the old men of the band. He is now permitted to take part in the singing and can be present when the sacred flutes are played in the flute hut. Although this creates an attitude of obedience to the older men, he still continues to be abusive toward the women of the band. His unmarried female cross cousins now begin to notice him and openly show their desire to go hunting with him.

The puberty ceremony for girls is much more elaborate. After a girl has her first menses her father builds a small hut in the center of the camp, in which the girl is secluded. She must remain in this hut day and night and is attended by her female relatives. The chief then calls all members of the band together, even sending messengers to distant hunting parties. When the band is united the chief organizes a hunt in which all the men take part, and they must remain away from the camp until the moon is full. While on the hunt they accumulate a great quantity of smoked meat. When the moon is full, the men send a messenger to the camp to whom the women give some of the

baked manioc and other food which they have been preparing. When the messenger leaves with the food it is a sign that the men will return to camp after sunset.

Before the men arrive the women wash the girl and paint her with a mixture which includes latex from the rubber tree. A series of dots are painted on her face, breasts, abdomen, and thighs (pl. 6, *c* and *d*). When the men come in they dance in front of the girl's hut. She then comes out and is given a name and everyone tries to give her a necklace or some other object. During the night men and women join in the dance, holding hands and dancing in a circle, the dance steps being stamped out with the right foot in the direction in which the circle is moving. A special puberty song is also sung.

The Nambicuara tell of a strange medicine known only to the shamans which is given to girls during the puberty ceremony. It is a blue liquid which, when taken internally, stops menstrual bleeding for the remainder of the girl's life. The Waklítisu claim that they do not use it but that the other Eastern Nambicuara band do. The missionaries informed me that the Kitánrbu use this medicine, and the missionaries seemed to think that it was effective.

#### MARRIAGE

There is no special marriage ceremony, for when young people go through the puberty rites they are ready for marriage and a mate is selected for them by their parents. The young man, who is to become the husband of a girl just out of seclusion, goes to her parents and helps his future father-in-law build a small hut, and when it is finished the young man tells the girl to come out hunting with him. She takes a burden basket and they go off into the woods. In the afternoon the man builds a fire and tells the girl to prepare some food and honey. After the food has been eaten he tells the girl to come and lie beside him near the fire. She is supposed to resist and he takes a stick and threatens her. He then has sexual intercourse with her, and when they come back to camp that night they are accepted as a married couple. When wives are acquired by inheriting the widow of a brother or by abduction from other bands, no ceremony is held.

#### BURIAL

When it is seen that a person is about to die the women wail for a while and then they all turn their backs to the dying person and begin to divide up his belongings. The corpse is buried in a grave dug in the village or camp site. The men loosen the soil with sticks and scoop out the soil with gourds until a roughly rectangular grave about 5 feet deep is dug. The men who lower the body into the grave take three balls of soil from the bottom of the grave with which they rub their legs and backs. A man's decorations are placed in the grave with him. In the case of a woman, two or three gourds are placed at her feet. The grave is then covered. A man's bow and arrows are broken and left on the grave. The rest of his belongings are burnt nearby and the people go on a hunt for a few days. A bit of burití fiber is left to mark the grave of a boy, although nothing appears to be left over the grave of a woman or a girl.

The ghost remains around the grave for several days and then goes to the sacred mountain where all the ghosts live. In the land of the dead the ghosts have fine necklaces, and nose feathers, and are always painted with urucú. But they do not wish to be forgotten and want the living to give them food. The Nambicuara do not fear ghosts, and like to have them participate in their ceremonies.

Two days before we left Utiarity, Marciano died. He was one of our best informants, the least morose and most helpful. A week earlier he caught cold which turned into pneumonia. It was pitiful to watch this naked man lying in the dirt beside a fire slowly gasping out his life. Once in a while he became conscious and tried to sing, calling the spirits to help him. About 9:30 that night he died. As there is something symbolic in his death and burial I would like to end this account of the Nambicuara with an entry from my diary dated July 30, 1949.

This morning we all went to the burial, the Jesuit priests, the Protestant missionaries, some of the Brazilians, and Kaoro and I. We dug a grave at an old Nambicuara camp site about a half a mile from Utiarity. As we walked along the telegraph line bearing Marciano's body the *sabiá* were singing and the air was full of the sweet odor of the *timbó* vine. Wrapped in a ragged blanket Marciano was lowered into his grave along with his



necklace and a few rusty cans, the grave was covered, and there we left him a few feet from the grave of his first wife who had died in the measles epidemic four years before. Then Julio, the chief, told all his people to gather around the grave and as he walked around it he told Marciano that here he had water and sunshine, and that after a few days he would be with the ancestors around

the stone mountain at Juruena. The white men had not a word to say. It seemed that we were not burying just an Indian but a race, older and more simple in its way of life than its Arawak- and Carib-speaking neighbors. And the telegraph line beneath which Marciano rests is the symbol of all those forces which destroyed him and are slowly destroying his brothers.

# THE UMOTINA

## THE PEOPLE AND THEIR HABITAT

The Umotina, who call themselves the Balorié, are settled today in the Indian Post of Fraternidade Indígena near Barra do Bugre on the Paraguay River west of Cuiabá. Before coming to the Post they occupied a village at Tira Santida just below Tres Barras. The Umotina, who today number about 65, are related linguistically to the Bororo who live directly to the east of them. In two respects, at least, they differ sharply from their neighbors—they have a pure Hawaiian-type kinship system and are pronouncedly dolichocephalic. The local Brazilians call them the Barbados, owing to their beardedness.

In the old days the village (*mukimo*) was built on the bank of a river and consisted of two rows of houses separated by a narrow plaza. The house (*ishipá*) was rectangular with a gabled roof coming down to the ground, the whole being covered with pacova palm fronds except the two ends which were left open. This house type is the same as that formerly found among the Guató who live to the south of the Umotina. Each family had its own house, the occupants sleeping on mats spread on the ground. The husband kept a fire going all night not only for warmth but also to drive away the mosquitoes.

In the past men wore no clothes but after puberty used a penis sheath (*bakyotókwa*) made from a buri palm leaf. The foreskin was pulled over the glans, and the leaf was wound around it and fastened with twine, the purpose being to hide the end of the penis from the women. Men wore their hair long, tied in a knot at the back of their heads, and allowed their beards to grow; but eyebrows, eyelashes, and pubic hair were plucked out. The lobes of the ears and the lower lip were pierced. Women, on the other hand, cut their hair short, and plucked out their eyebrows and eyelashes but not their pubic hair. Women wore a knee-length skirt (*imetá*) made from woven cotton. Like the men, the women had their ear lobes pierced.

The principal ornaments used by men consisted of beautifully made feather ear pendants (*imitúta*) about 6 inches long, jaguar-teeth necklaces (*okopó*), necklaces made from human hair (*pasovó*), and cotton arm bands worn above the biceps. A short bamboo lip plug was worn in the lower lip. A crude comb, *putúka*, was made by binding together with human hair four siriva wood spikes about 5 inches in length. During dances the men fastened rattles made from tapir and peccary hoofs to their ankles. Women wore feather ear pendants and "store"-bead necklaces. Some of these ornaments are still worn by the old men.

## ECONOMICS

### AGRICULTURE

The traditional food crops of the Umotina included such plants as bitter manioc (*otuíyo*), sweet manioc (*otuíyo biboróno*), maize (*omatáka*), black and red beans (*dumatáka*), sweetpotatoes (*balarkúpo*), and cará (*tapatúku*). In addition, they cultivated gourds (*poári*), cotton (*akyámani*), and urucú (*nodókahirika*). Tobacco was not grown, as the Umotina did not smoke in the past. The food supply was further augmented by the collection of a wide variety of roots, nuts, and fruits, including the piqui (*heír*), mangaba (*batorúkwa*), and the "marmelo" (quince, *hashorúkwa*). Honey (*psíru*), was considered a delicacy and collected particularly before ceremonies.

Fields were cleared in the forest, but instead of felling the large trees, the branches were trimmed off in order to let in the sunlight. The undergrowth was beaten down with a wooden sword club (*ántho*) made from the wood of the siriva palm. In September the dry cut-over was burnt, and with the use of only a digging stick (*tápu*), the planting began. Maize was planted first; three or four seeds were put into a hole about 6 inches deep in order to protect them from birds. Manioc was planted by putting two pieces of stalk into a hole prepared with a digging stick. The field was weeded about a month later, after which the



people went hunting and fishing. Only men did the field work, clearing the field together, but each family head planted his part of the field. If the crops did not grow well the ghosts were asked to cure the field.

Bitter manioc was prepared for food in two ways. First, unpeeled tubers were left to soak in water for 2 days, then squeezed in a strip of bast or a piece of cotton cloth. After the skins and fibers were picked out the pulp was rolled into balls and dried. The dry balls were later ground in a mortar, and the meal was sifted in a circular burití fiber sieve and stored in baskets. When a woman wished to bake she placed some of the meal in a shallow pot, dampened it with water, and placed it on the fire to produce *jukupóto*, "beizhú." By the second method they produced *chicha* (*zumima*). The tubers were peeled and grated, and the pulp, mixed with water, was boiled for several hours until it formed a thick paste. This preparation was eaten when cooled. Sweetpotatoes and maize were roasted; and fish and meat were broiled over a babracot.

#### HUNTING AND FISHING

The siriva palm wood bow (*boika*) is used in fishing and hunting, and formerly it was used in war. Umotina bows ranged from 5 to 7 feet in length, 2 inches in width, and an inch in thickness in the middle. In cross section the bow is oval, often somewhat more flat on the inner side. Siriva wood is black with white streaks, but with age and polishing the bow turns jet black. Slight shoulders are notched at each end to hold the bowstring (*boiko*) made from tucum fiber, the extra length being wound above the handhold. The 5-foot arrow (*isho*) is made by fixing a notched canela or siriva foreshaft to a taquara shaft. This point is used for fish and small game. Bamboo points are used for big game such as tapir, jaguar, and peccary. All arrows excepting those used in fishing are feathered with urubú or mutúm feathers. A feather about 8 inches long is split and the halves are fastened to the arrow with twine lashings about one-eighth inch apart, which are then covered with pitch.

Fish were shot from the banks and, in shallow pools, were drugged with timbó. Women used a cast net fastened to an oval hoop (*búkye*) for catching small fish after they were drugged.

Men hunted all the local game singly or in groups, but in former times did not use dogs.

Women make pots (*porikupú*) of various sizes, all shaped like half of an egg shell. Both men and women make baskets of two types. One, shaped like the pots, called *kothodókwá*, is an openwork burden basket about 24 inches high and 16 inches across at the top and is made from aguasai palm leaves. The other, which is in fact a bag, is made from the cortex of burití palm fronds. This bag (*yethabótho*) is used for storing feathers, twine, and ornaments. Men weave the sleeping mats from the same material used for making the burden baskets. Women spin cotton, using the spindle (*hálaka*) spun on the ground. Cotton materials are woven by women on an upright loom (*ipokápa*).

#### SOCIAL ORGANIZATION

In the past the chief (*hutorikána*) was not only an economic and ceremonial leader but a war leader as well. Although the son of the chief had a right to succeed his father, the actual decision was made by all the men in council. The Umotina say that they used to fight with a tribe called Abusé that lived to the north of them and with white men. When the chief decided on a raid he blew his horn (*ipóna*) made from the shell of an armadillo. The men then made arrows and war clubs, and just before attacking they painted themselves black with genipapo and glued feathers on their temples. The Umotina used a shield made by stretching tapir skin on a square wooden frame, and they poisoned their arrows. When attacking they killed the men but sometimes kept some of the younger women. They cut off the heads of their enemies and used the teeth to make necklaces. The heads of white men were boiled and eaten.

The kinship system of the Umotina is of the Hawaiian type. In the grandparents generation there are terms for grandfather (*iyokomishína*) and grandmother (*imakomishóto*) which are extended to the siblings of the grandparents. In the parental generation there are just two terms, father (*iyóko*) the term being extended to cover father's brothers and mother's brothers, and the term mother (*imáko*) which is extended to cover mother's sisters and father's sisters. In ego's generation there are terms for brother (*amána*) and

sister (*ashimbé*) which are extended to both parallel and cross cousins. Distinctions are made for younger and older sibling. Only one term is used for designating one's own children, brother's and sister's children, as well as grandchildren, *manundó*. (See chart 12.)

An individual is prohibited from marrying parallel and cross cousins but beyond this restriction he is permitted to marry into any of the other families. After marriage a young man lives with his wife's family until his father-in-law dies. He then builds a house near his own brothers. During his stay with his wife's family he obeys his father-in-law as if he were his own father. There appear to be no father- or mother-in-law taboos. Disputes between the families were settled by the chief who forced wrongdoers to make payments to the injured parties.

## RELIGIOUS BELIEFS AND PRACTICES

### MYTHS

One day some ripe figs fell from the fig tree and out of one of these figs came *Aipuku*, the first man in the world. He woke up suddenly and walked around. He was lonely and thought a long time about what to do. Then he picked up four figs and placed them in a row on the ground and walked away. He heard voices, and when he came back the figs had turned into human beings, two men and two women. One of these was *Barabéla* whom he married; the others went away.

Then *Aipuku* made the ancestors of many Indian tribes. He took macaba palm nuts and set them in a row; from these nuts came the Umotina—the men came from the long nuts and the women from the short nuts. He made skirts for the women and gave each man a bow and some arrows, told them where to live, and gave each one a name. These people married and are the ancestors of the Umotina. Then he made many other Indian tribes, using the fruit of the mangaba and the berries of the bauwi tree.

One day *Barabéla* asked *Aipuku* what was wrong with his legs. He looked down and noticed that the calves of his legs were sore and swollen. They kept swelling until they burst open. Out of one calf came the white men (*uwasé*), and out of the other, the *abusé*, or enemy Indian tribes.

*Aipuku* then made holes in the ears of the *abusé*, but the *uwasé* refused to have their ears pierced. He then asked them to live with him, but they refused. The *abusé* went north, and the *uwasé* went south. *Aipuku* was sad because his children disobeyed him. It is interesting to note that the *abusé* and *uwasé*, who were the traditional enemies of the Umotina, came from the sores in *Aipuku's* legs, were unasked for, and were disobedient. After creating all the people, *Aipuku* and his wife left.

In the old days the Umotina did not have maize. One day when a woman was out in the woods collecting she found some *sucurí* (anaconda) eggs. She thought that they were birds' eggs and put them in the basket which she carried on her back. The eggs broke, leaked down her back and into her womb. She became pregnant and gave birth to a snake. She liked the snake very much because it was her child and could talk. In order to hide it from her sons she let the snake go into her womb. One day, however, the sons saw the snake as it went up into a *burití* tree to collect nuts. They asked their mother who it was. At first the woman denied seeing it, but her sons insisted. Finally she said it was her son. The boys were very angry and said they would kill the snake when they saw it again. The snake heard this while he was hiding in the woman's womb. For a long time the woman carried the snake in her womb but one day it came out and went into the woods to collect *burití* nuts. The woman's sons saw it, killed it, and cut it into pieces. The mother went into the woods and cried when she saw what had happened to her snake-son. She picked up the pieces and buried them and from each piece a maize plant grew up. She gave the ears to the other women in the village who planted them. Since then the Umotina have had maize.

One day a woman caught a "lambari," a small fresh-water fish. She liked this particular fish very much and, as she had no children, she took it home and hid it under a mat. Soon she heard it crying and when she lifted the mat she saw a boy instead of a fish. For a long time the woman hid the fish-boy from her husband, but the boy insisted on going out and following the man when he went into the woods. One day as he was following the man he called out and asked him



to wait for him, but the man would not wait and continued walking and whistling. The fish-child returned home and asked, "Why does my father act like this, he does not like me for he always leaves me behind." The mother then explained, "You are not his son, you are a little fish." The boy was very sad and answered, "As I have no father I do not wish to live." He then went out in the woods, climbed a tree, and began jumping from one tree to another until he became tired and fell down and died. The woman went looking for him and found his body and brought it back to her house. The woman was very angry with her husband and explained who the boy was. The husband was sorry for what he had done and both of them went out and buried the fish-boy. From his corpse grew the following crops: Sweet-potatoes from his testicles, pepper from his eyes, and beans from his ears.

#### GHOSTS

When a person dies his ghost (*arumuntú*) goes into the sky, climbing up on a ladder made of sipo vine. The ladder is guarded by a *cotia*, a rabbitlike rodent, who calls out everytime a ghost is going up or down. Another version states that in the old days the ghosts went up the ladder and later came down as living beings, but one day the *cotia* gnawed away the ladder so that when a person dies today he can no longer go into the sky and return to the earth as a living being but must remain here as a ghost. The *arumuntú* sometimes enter the bodies of birds and animals. The ghost of an old bearded hunter is believed to enter the body of a jaguar or an eagle so that he can continue hunting. When a jaguar is killed the Umotina examine it carefully, for they believe that they can recognize whose ghost lived in it.

Some ghosts are good; others are evil and cause sickness. The good ghosts are those who have a living human representative whose body they can enter during the annual *ardueto* ceremony and who have living relatives who make offerings to them. Evil ghosts are foreign ghosts or the ghosts of Umotina who have died away from the village or who have no relatives to make offerings to them. When a person dies, the relatives invite some man from another family to bury the corpse. This man then becomes the ceremonial or spirit father, mother, brother, sister, son, or

daughter depending upon which relative died, and once every year the ghost returns and enters the body of the person who did the burying and dances in the *ardueto*. But if the deceased has no relatives who can offer the gravedigger gifts, then the ghost becomes angry and does harm. He makes people sick, breaks pots, and takes the form of a jaguar or a snake and kills people. Eventually, however, ghosts of this kind die.

Thus the important religious rite of the Umotina is the *ardueto*, which is given every year at the beginning of the rainy season. Large quantities of fish, meat, and manioc cake are prepared by the family heads who have ghosts to whom they must make offerings. The ghosts are impersonated by the gravediggers dressed for the occasion. There appears to be four classes of spirits: the *pódopódo* or ghosts of men who have living relatives; the *bakúre* or male ghosts who have no relatives but must be appeased during the *ardueto*; and the *akakóno* and the *hatóri* who are the female correspondents of the above-mentioned male spirits. The *pódopódo* and *akakóno* dancers wear long mantles made from burití leaves, which reach from the shoulders to the ground. They wear macaw feather headdresses, glue feathers above their eyes, and pull their hair over their faces and fasten it to their beards. The *bakúre* mantle is the same as that of the *pódopódo* but it is tied around the waist, the dancer wearing a mask made from burití bark. The *hatóri* dancer wears a costume made by suspending a burití leaf mantle from a large hoop about 3 or 4 feet in diameter. A mask made from a net is placed on top of the hoop. The dancer then gets underneath and holds the hoop with his hands while dancing.

While the dancers are performing at night the women sing and the men play the flutes (*káto*) and shake gourd rattles. The flute is about 3 feet in length and is made from taquara. It is played from the side like a clarinet.

The givers of the *ardueto* are those men who have lost relatives since the *ardueto* the year before. These men usually combine in collecting the food and building a temporary house in which the dancers dress for the ceremony. When the ceremony is over the dancers give their mantles to the givers of the feast, who use them for making mats.

The Umotina do not appear to have shamans. Every man is believed able to call up any friendly ghost. He blows on an armadillo-shell horn and offers the ghost chicha. That night the man will meet the ghost in his dreams, who will then tell him what to do in order to cure himself or a sick relative.

### LIFE CYCLE

A month or two before expecting a child a woman eats only manioc products, maize, and honey; meat and fish being strictly avoided. These dietary restrictions continue for some months after the birth of the child. The husband, however, is free to eat what he wishes.

When a woman feels birth pains she goes into the woods accompanied by her mother or mother-in-law. Delivery is made in a kneeling position. The umbilical cord is tied with tucum twine and cut with a bamboo sliver, the placenta being buried. The midwife then carries the child and assists the mother back to the village. The child is taken near a fire, washed, and its arms and legs are "pressed into human shape." Twins are accepted. When the child is a day or two old, tucum nut washers are put on its ear lobes to pierce them. These thin perforated disks are the same in appearance as those used by the Nambicuara. The grandparents then give the child a name. The child is carried on its mother's hip and is nursed for 2 or 3 years or until another child is born. The Umotina gave no information about using herbal medicines to induce abortion, nor did they mention anything about infanticide. The first foods a child eats consist of baked sweet-potatoes, broiled fish, and occasionally meat. Children sleep with their mothers until about 5 or 6 years of age.

When a girl reaches the age of puberty she paints herself with urucú and puts on a pair of feather ear pendants to let the young men know that she has come of age. She is not secluded by her parents nor is a public ceremony held. When a boy reaches the age of 15 or 16, an old male relative pierces his lower lip with a bone awl. The family then invites the villagers to a feast. The visitors must bring arrows, which they present to the young man.

Young men choose their future wives. When a young man finds a girl he likes he paints himself, puts on all his decorations, goes to the girl's house, and sleeps on the girl's mat all night, but without touching her. Next morning the parents of the girl ask her if she wishes to marry the young man. If the girl agrees, her mother orders the young man to go out hunting. The mother observes the young man's behavior and success in hunting. When the young man has brought in enough game he is permitted to sleep with the girl and is thereafter considered her husband. He remains with his in-laws and is treated like a son, for if the father-in-law has sons of his own they go out in marriage. Mothers-in-law appear to be important in men's lives, for one man told me that when one goes into the spirit world one asks first about one's mother-in-law.

When a person is dying the relatives begin to wail around his mat. The friends of the dying then come and participate in the wailing. A relative of the dying person then selects a non-relative to bury the corpse. This man, who is called *motoháto*, asks other men to help him and they dig a grave about 5 feet deep in the floor of the house using sword clubs for digging. The body is then painted and the decorations are put on, the bow and a few arrows are laid beside him so they rest on his right shoulder, and the sword club is placed on his chest. He is then sewn up in four layers of sleeping mats (*púpurúna*) and is lowered into the grave. A woman is similarly wrapped in mats, and a digging stick is placed with her. The grave is left open for one day so that friends and relatives can continue crying over it. The people build a new house nearby but keep the old one repaired for as long as a year, depending upon how well the deceased person was regarded by his or her relatives.

Men enter the spirit world armed so that they can defend themselves. The digging stick which the women take is also used for defence. If men quarrel and fight while living, the loser dreams that when he dies he will turn into a jaguar or a snake and will lie in wait for his enemy's ghost. When this ghost enters the spirit world he will kill it. This is why men must be armed. The Umotina stated that their greatest fear was about their own souls after death. If a person injured



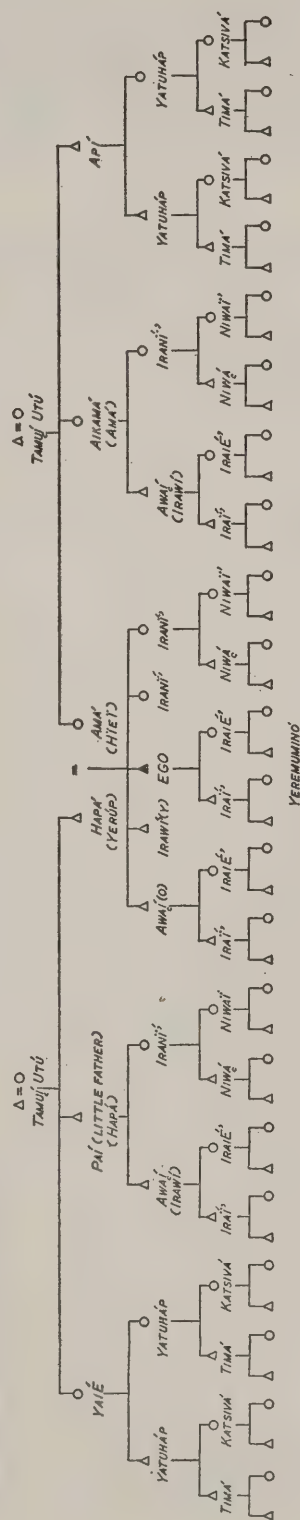
another while living, he might be punished after death by having his ghost killed. There appears, thus, to be a relationship between the life of the ghosts in the spirit world and the tensions existing between the families which were not direct kin with one another. Even while alive the ghosts

punished evildoers. If a man does an injury to another, the injured man's father's or brother's ghost would come at night and beat him. To be sure that one's ghost would survive, the Umotina say a man must be good to his relatives and must not quarrel with the people in the village.

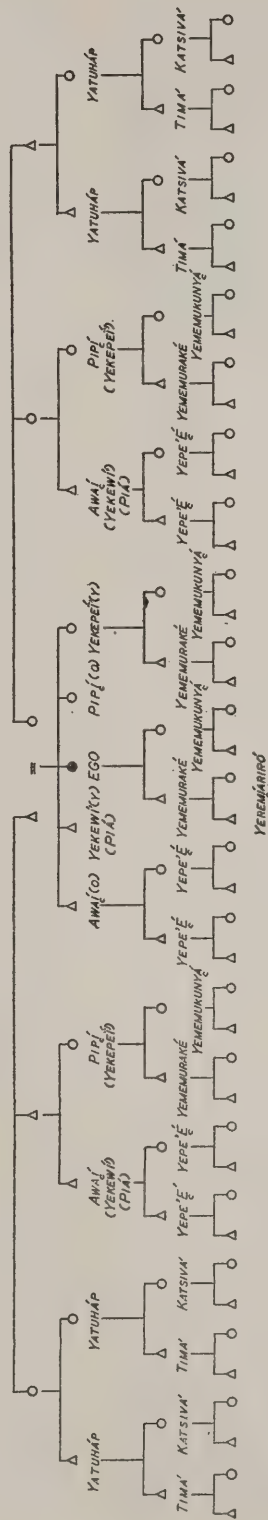
### KINSHIP CHARTS

Charts 1 to 14 give kinship terms of the Camayurá, Bacairí, Nambicuara, and Umotina, and other northern Mato Grosso tribes. (See pp. 112-123.)

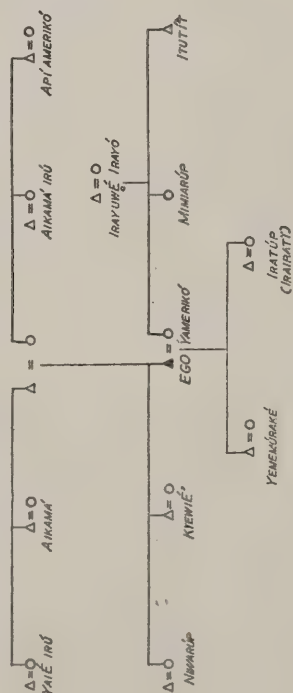
BLOOD RELATIVES - MAN SPEAKING.



## BLOOD RELATIVES - WOMAN SPEAKING



### AFFINAL RELATIVES - MAN SPEAKING



AFFINAL RELATIVES - WOMAN SPEAKING

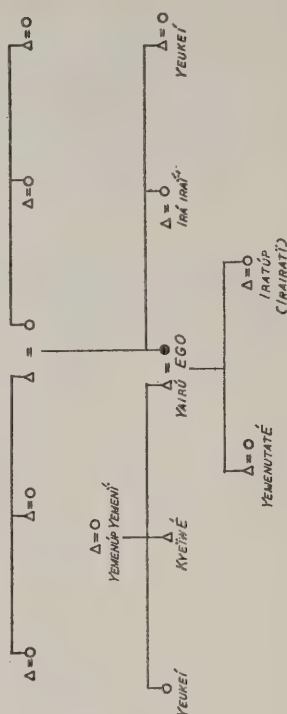
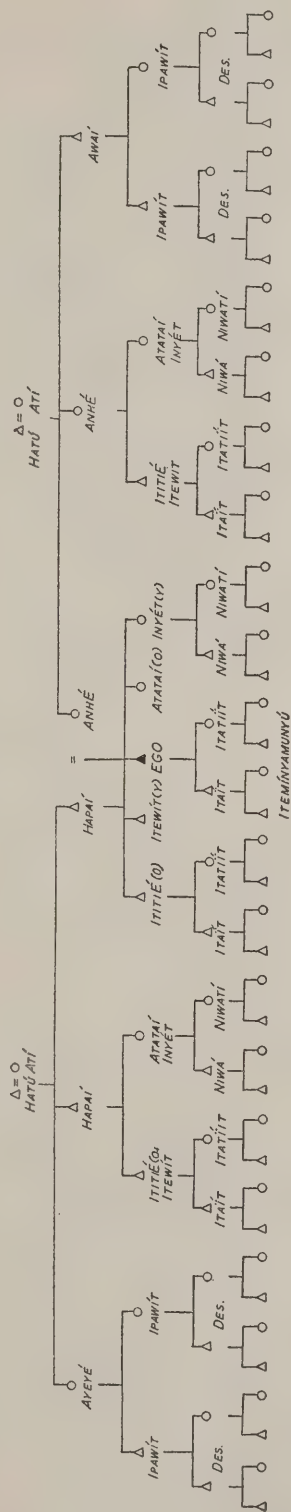


CHART 1.—Camayurá, Tupí-speaking.

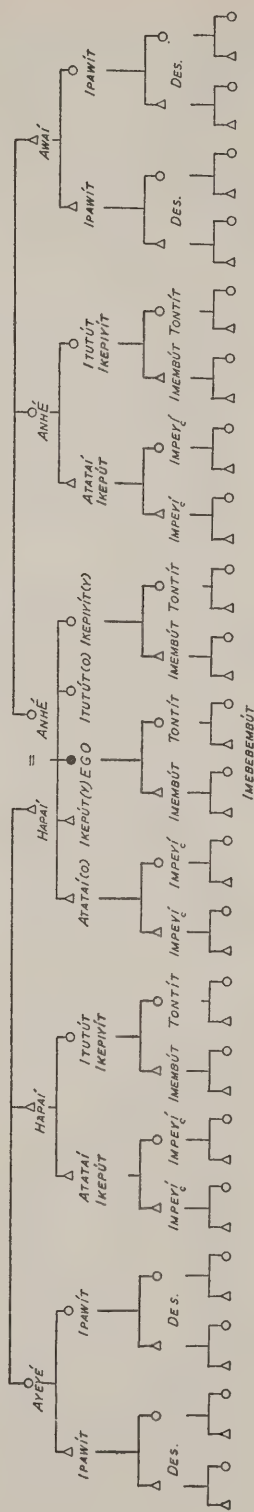


# AUETÍ

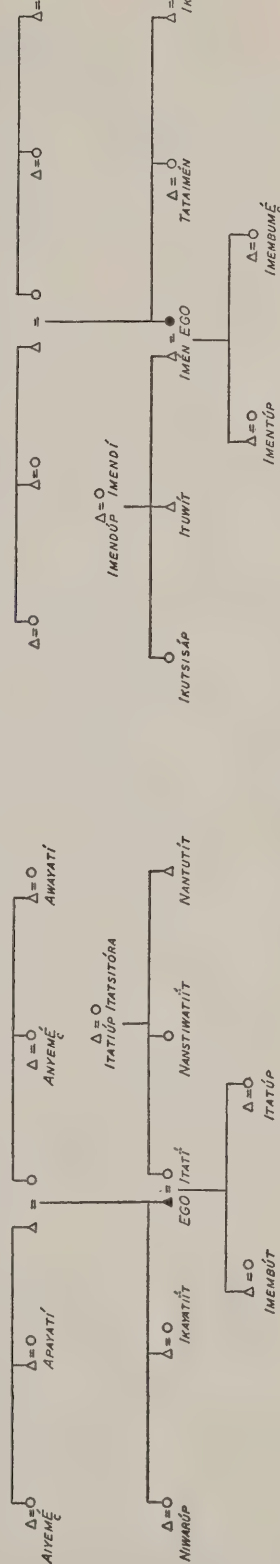
BLOOD RELATIVES - MAN SPEAKING



BLOOD RELATIVES - WOMAN SPEAKING



AFFINAL RELATIVES - MAN SPEAKING



AFFINAL RELATIVES - WOMAN SPEAKING

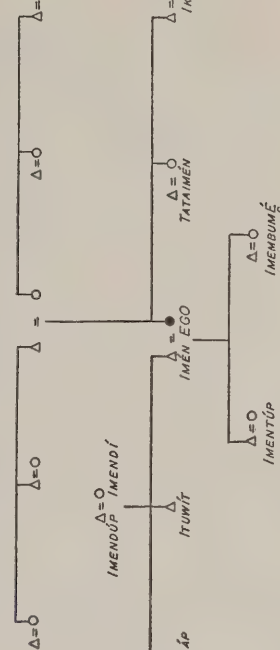
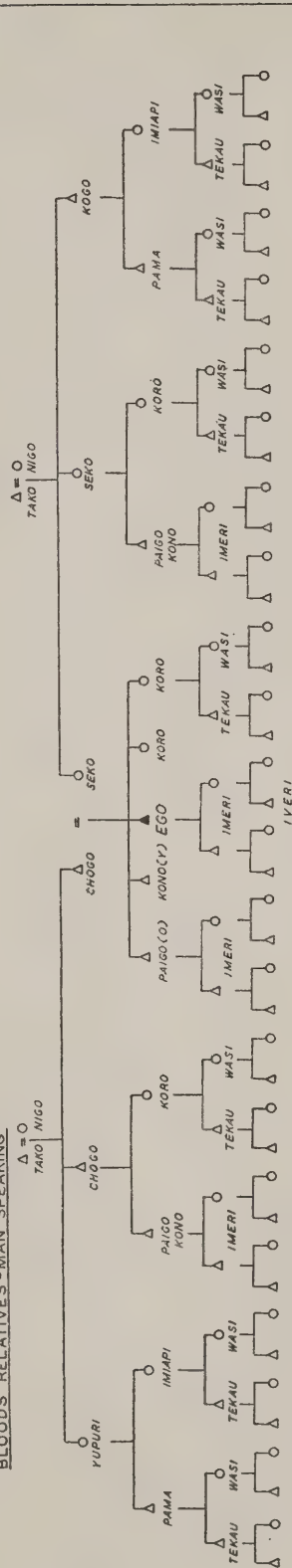
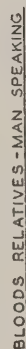
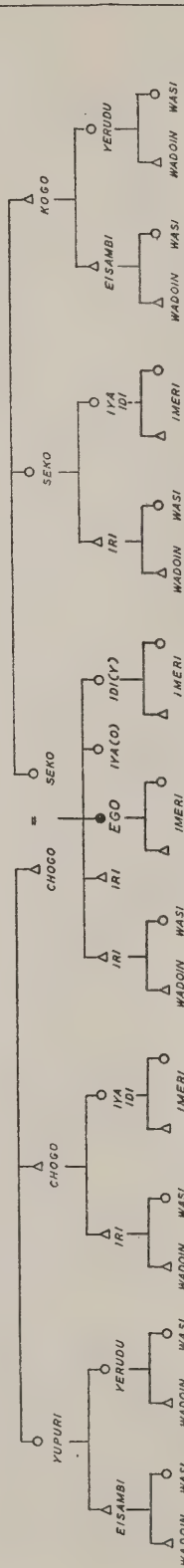


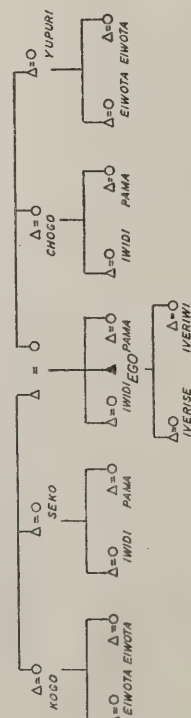
CHART 2.—Auetí, Tupi-speaking.



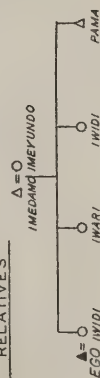
### BLOOD RELATIVES - WOMAN SPEAKING



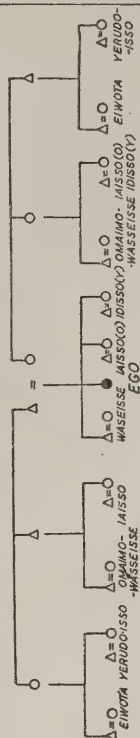
## AFFINAL RELATIVES - MAN SPEAKING



## WIFE'S RELATIVES



AFFINAL RELATIVES - WOMAN SPEAKING



## HUSBAND'S RELATIVES

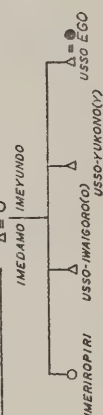


CHART 3.—Bacairí, Carib-speaking.



# CALAPÁLO

BLOOD RELATIVES—MAN SPEAKING.

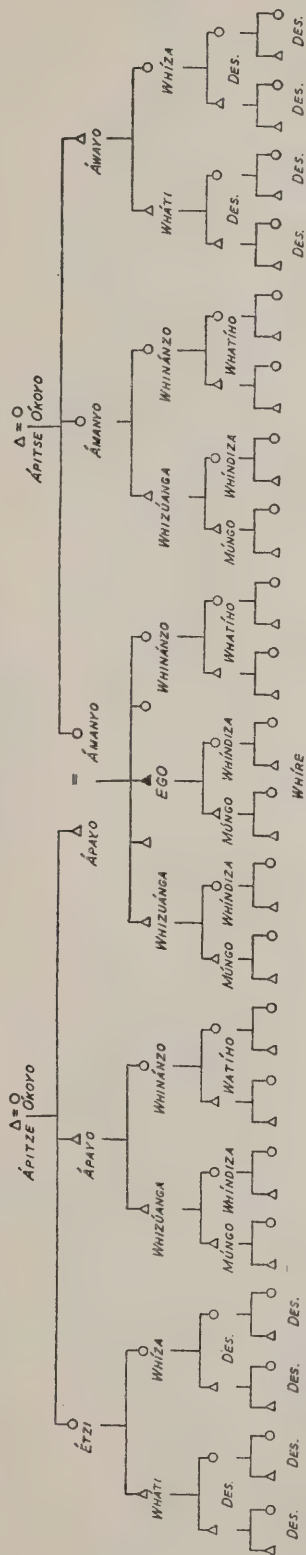
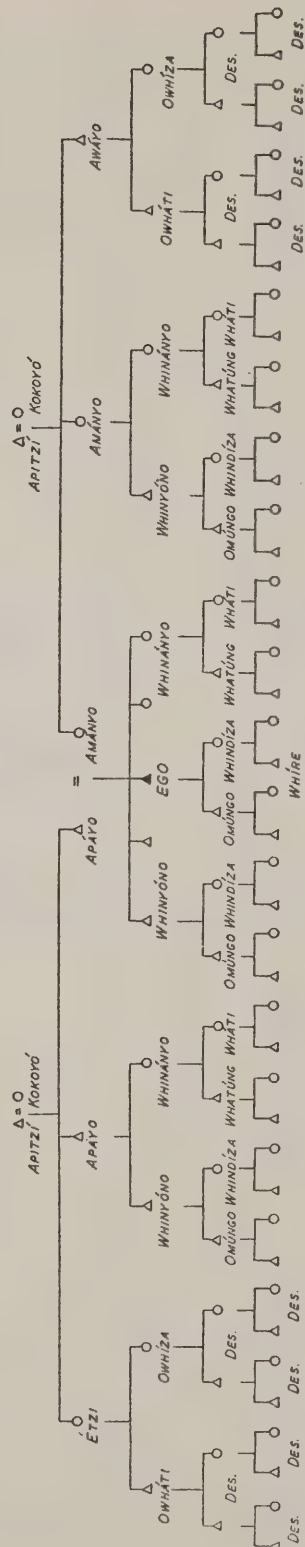


CHART 4.—Calapálo, Carib-speaking.

# CUICÚRU

BLOOD RELATIVES—MAN SPEAKING.



AFFINAL RELATIVES—MAN SPEAKING

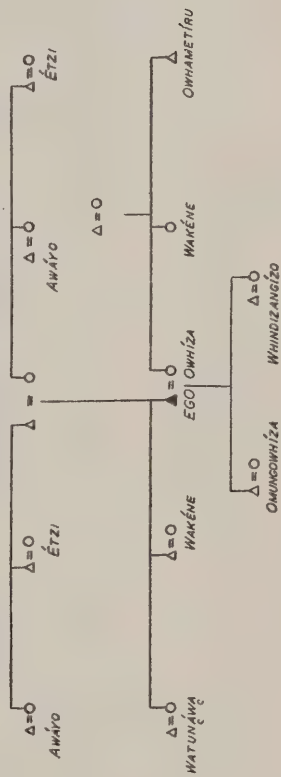
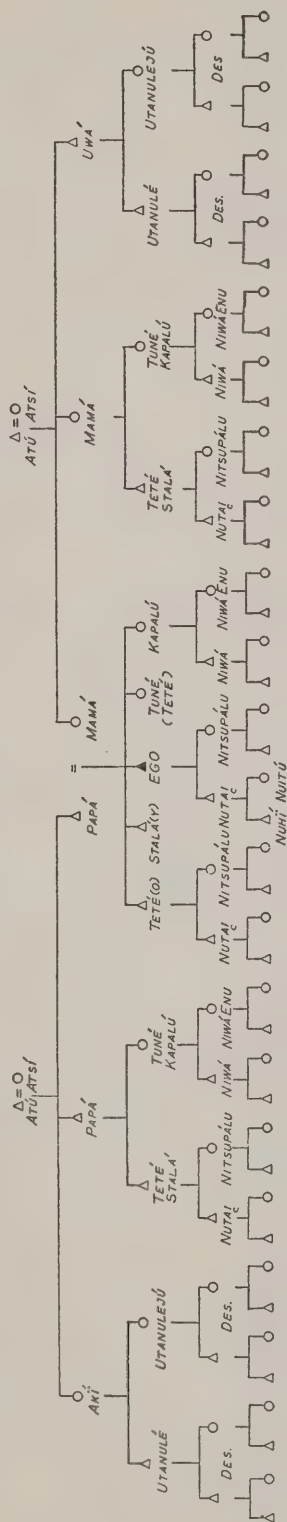


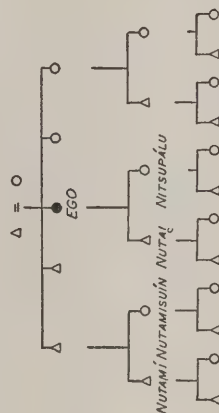
CHART 5.—Cuicúru, Carib-speaking.

WAURÁ

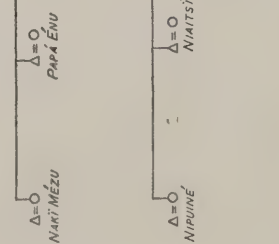
BLOOD RELATIVES - MAN SPEAKING.



BLOOD RELATIVES - WOMAN SPEAKING.



AFFINAL RELATIVES - MAN SPEAKING.



AFFINAL RELATIVES - WOMAN SPEAKING.

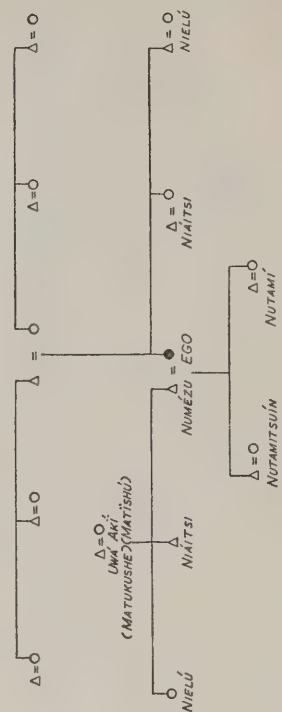
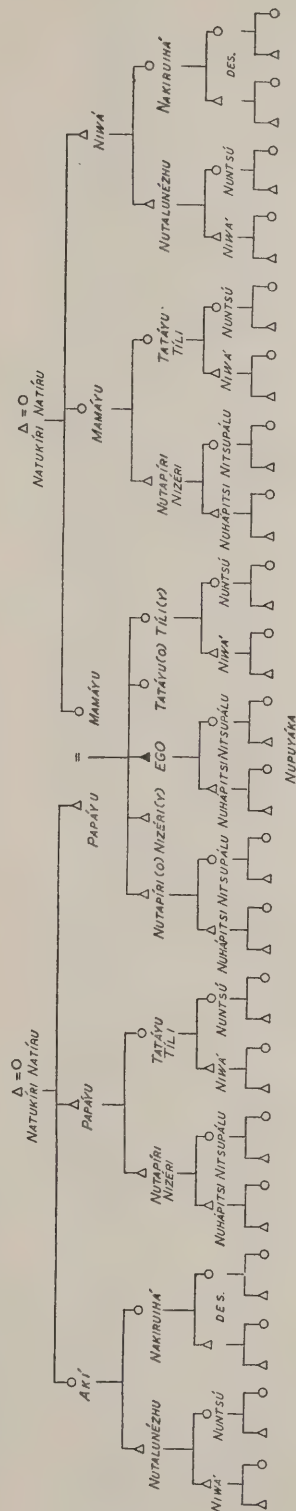


CHART 6.—Waurá, Arawak-speaking.

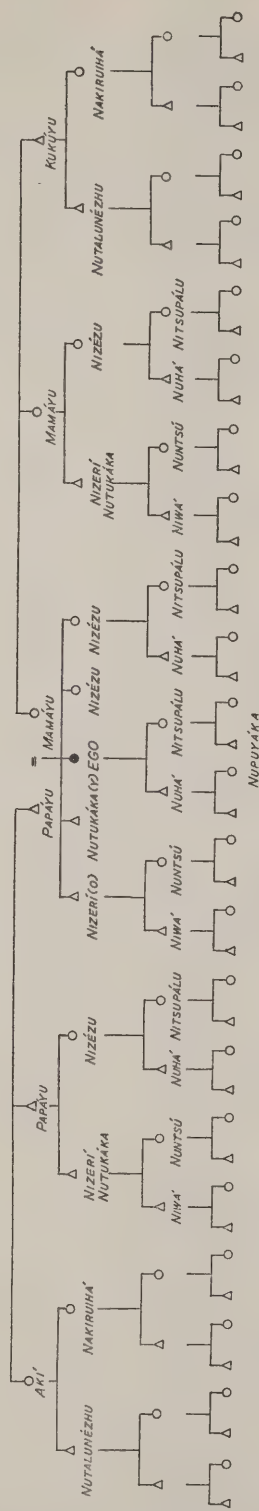


# IWALAPETÍ

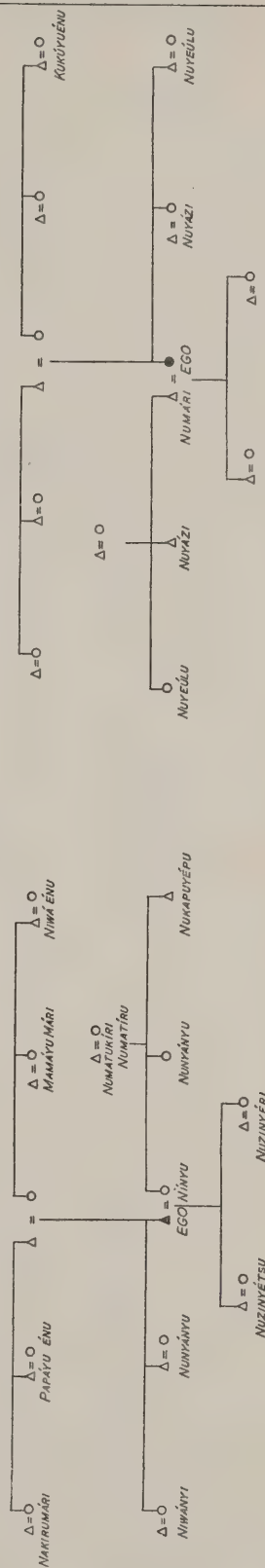
## BLOOD RELATIVES—MAN SPEAKING



## BLOOD RELATIVES—WOMAN SPEAKING



## AFFINAL RELATIVES—MAN SPEAKING



## AFFINAL RELATIVES—WOMAN SPEAKING

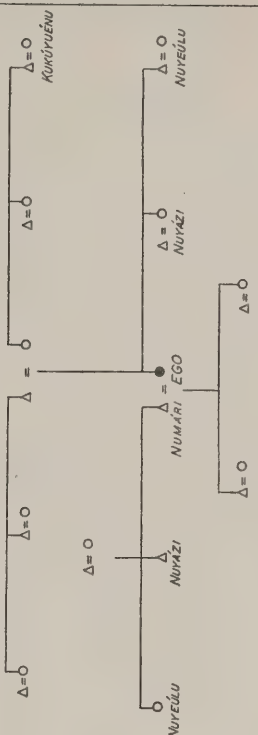


CHART 7.—Iwalapetí, Aravak-speaking.

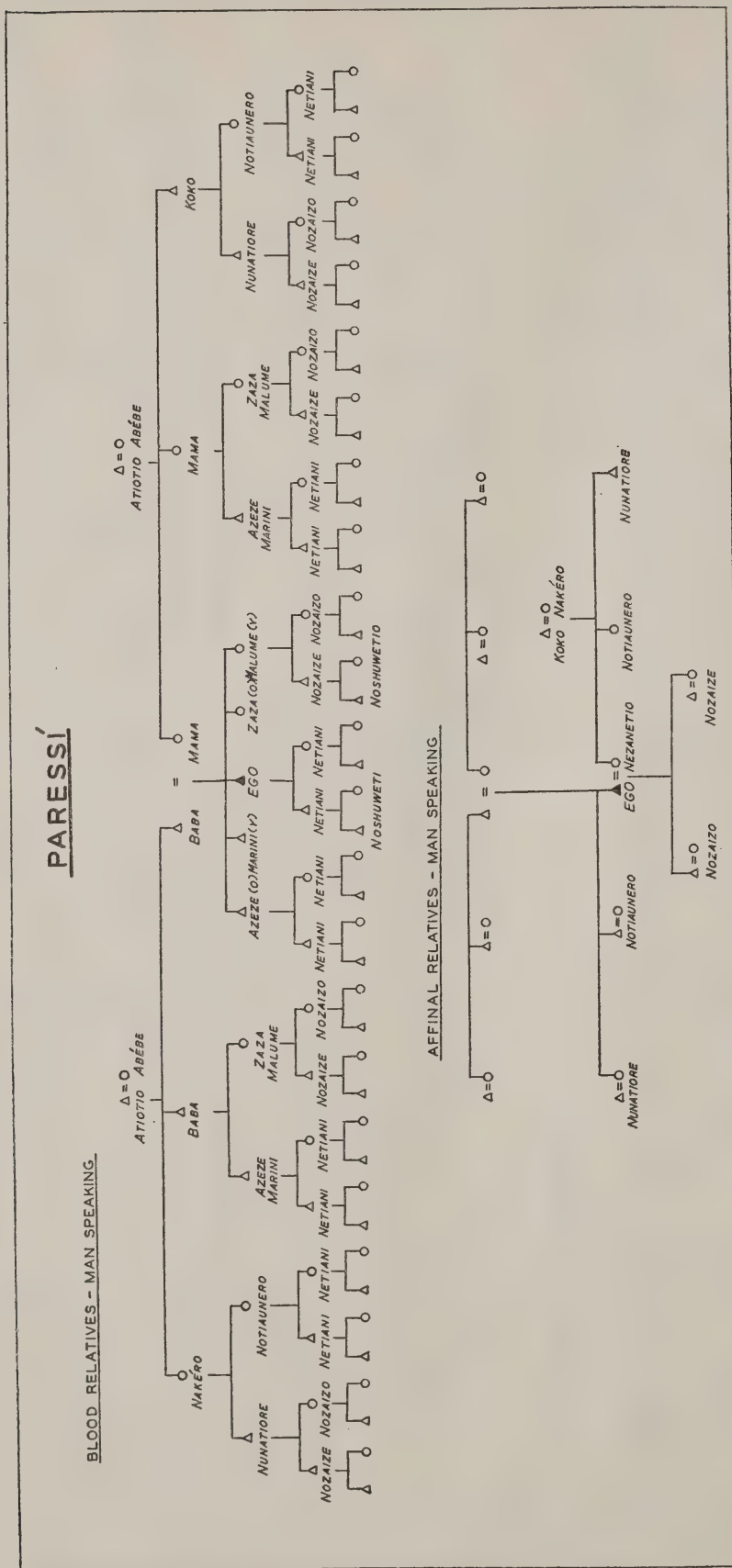
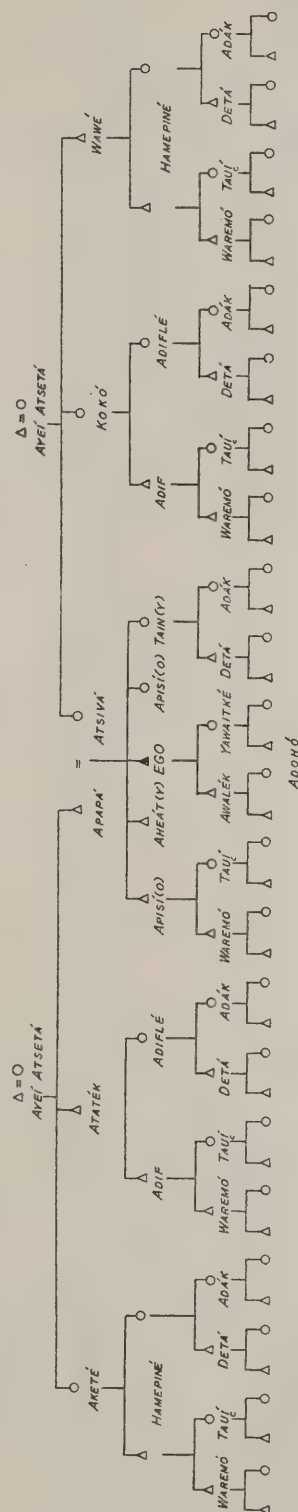


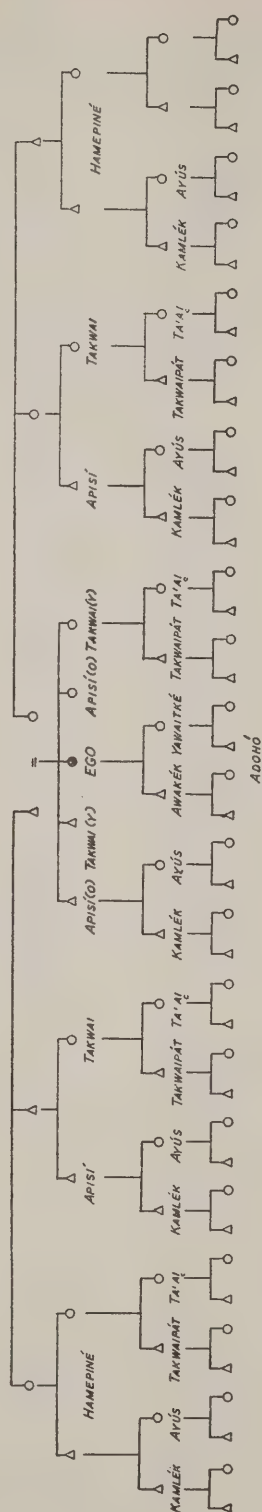
CHART 8.—Paresi', Arawak-speaking. Husband, *Nezanene*. Sometimes *Nodje* is prefixed to *Marini* to designate younger brother or sister. To designate son or daughter, *Enamokosé* (male) or *Ohiromokosé* (female) is suffixed to *Netiani*.



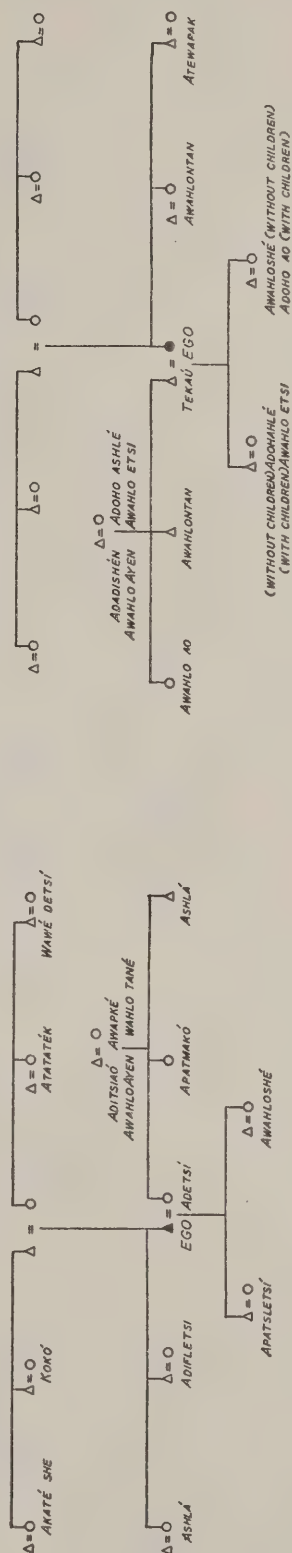
BLOOD RELATIVES - MAN SPEAKING



### BLOOD RELATIVES - WOMAN SPEAKING



## AFFINAL RELATIVES - MAN SPEAKING



### AFFINAL RELATIVES - WOMAN SPEAKING

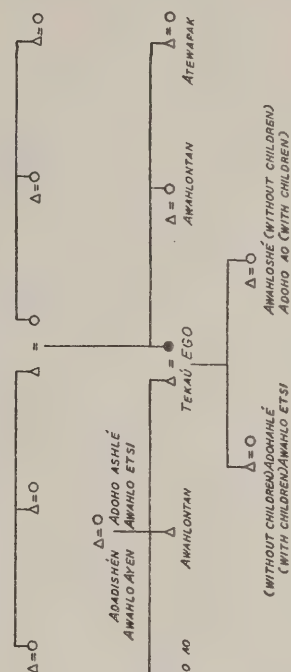
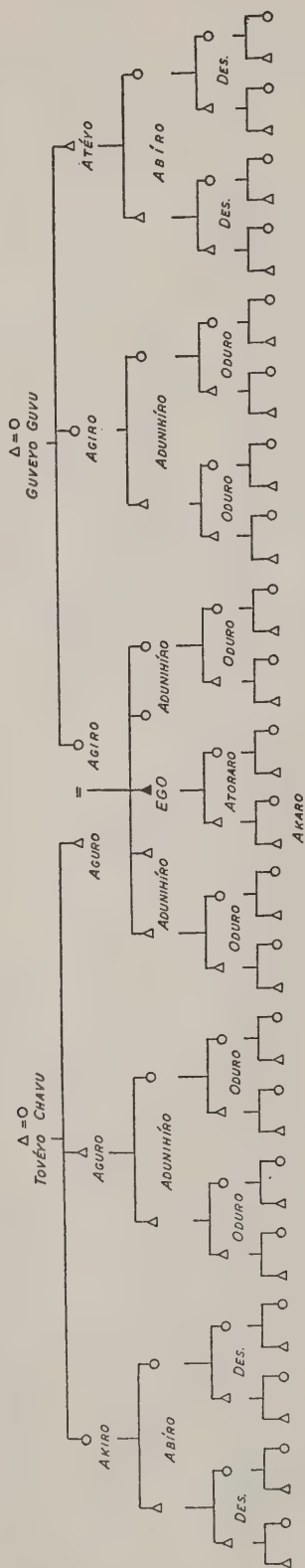


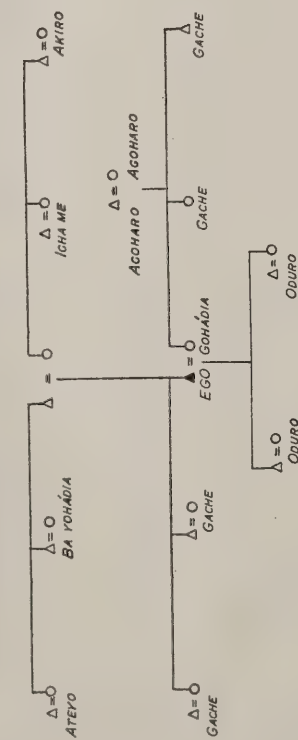
CHART 9.—Trumai, unrelated.

# GUATÓ

## BLOOD RELATIVES - MAN SPEAKING.



## AFFINAL RELATIVES - MAN SPEAKING.



## AFFINAL RELATIVES - WOMAN SPEAKING.

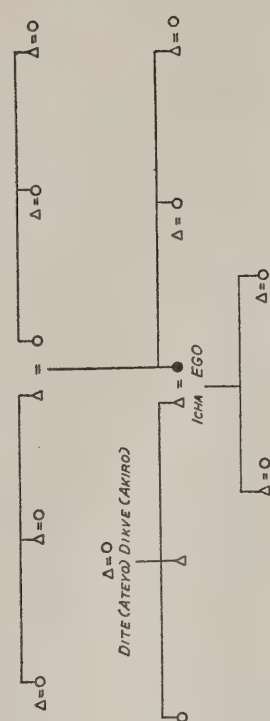
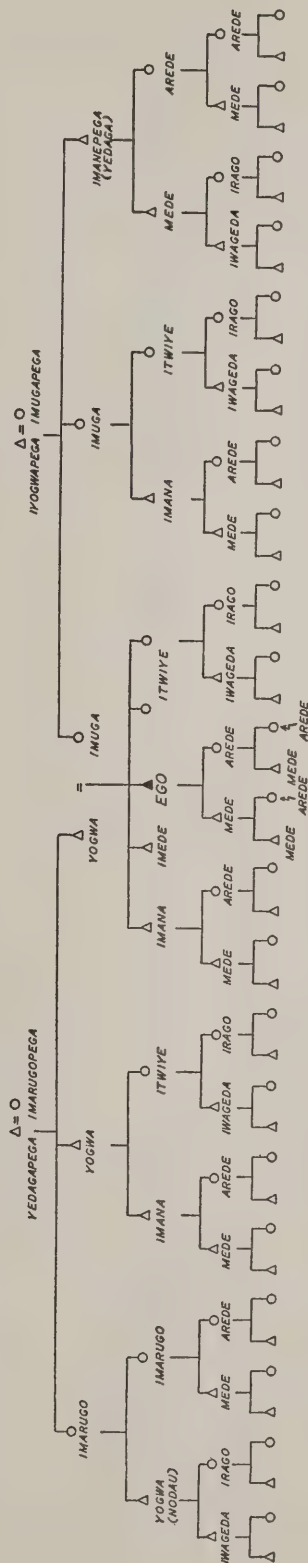


CHART 10.—Guató, unrelated. To designate male and female, *gode* (male) and *gohadia* (female) are added to brothers, sisters, cross cousins, sons, daughters, and grandchildren.



# BORORO

## BLOOD RELATIVES—MAN SPEAKING



## AFFINAL RELATIVES—MAN SPEAKING

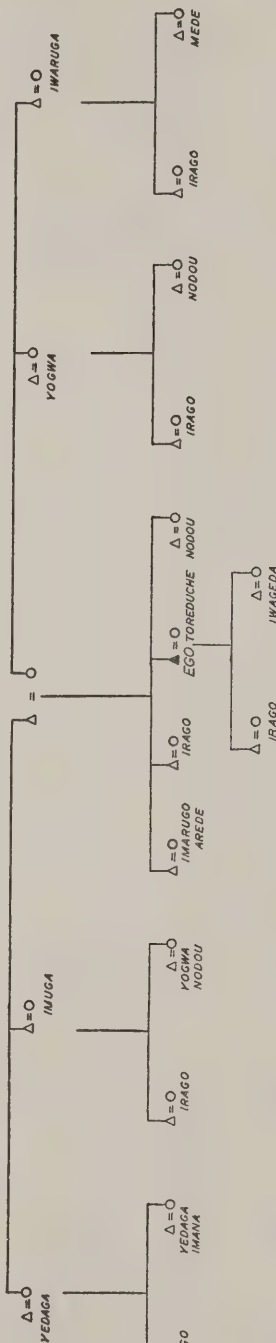
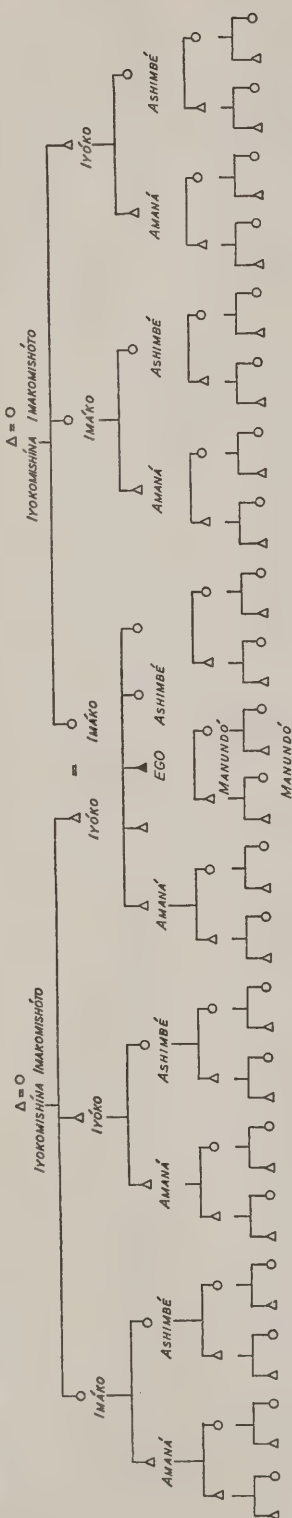


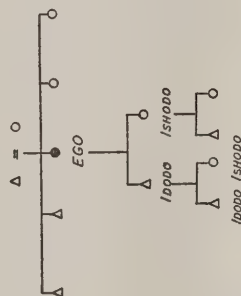
CHART 11.—Bororo, unrelated. (See Appendix 2.)

## UMOTINA

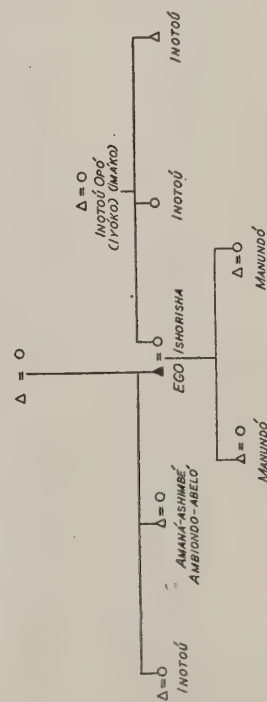
## BLOOD RELATIVES - MAN SPEAKING



## BLOOD RELATIVES - WOMAN SPEAKING



## AFFINAL RELATIVES - MAN SPEAKING



## AFFINAL RELATIVES - WOMAN SPEAKING

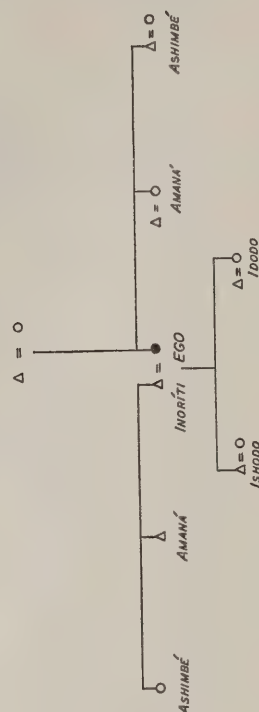


CHART 12.—Umotina, related to Bororo. *Abi* (brother) is considered more respectful than *Amaná*. *Ambindo* is used to designate younger brothers. *Ambindo* and *Abeló* designate younger sisters. *Parepo* is added to *Manundó* to designate son or grandson. *Omunoló* is added to *Manundó* to designate daughter or grand-daughter.



# NAMBICUARA

BLOOD RELATIVES—MAN SPEAKING

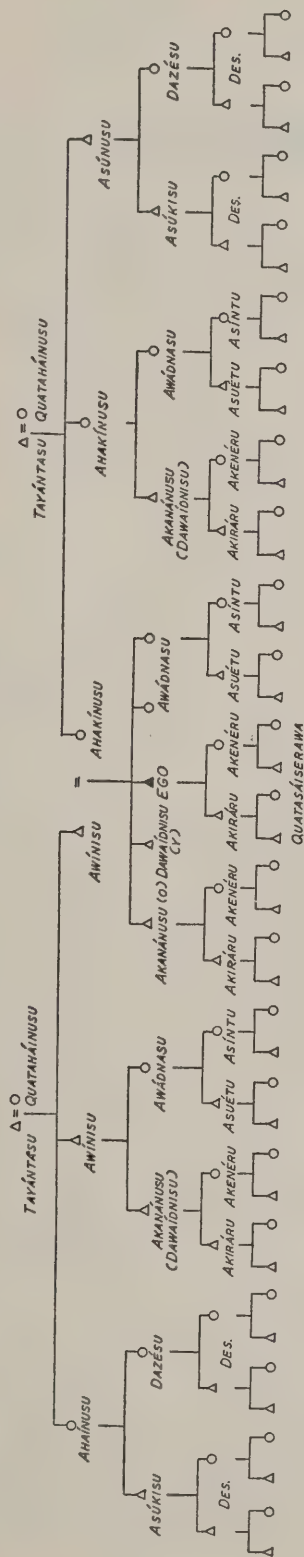
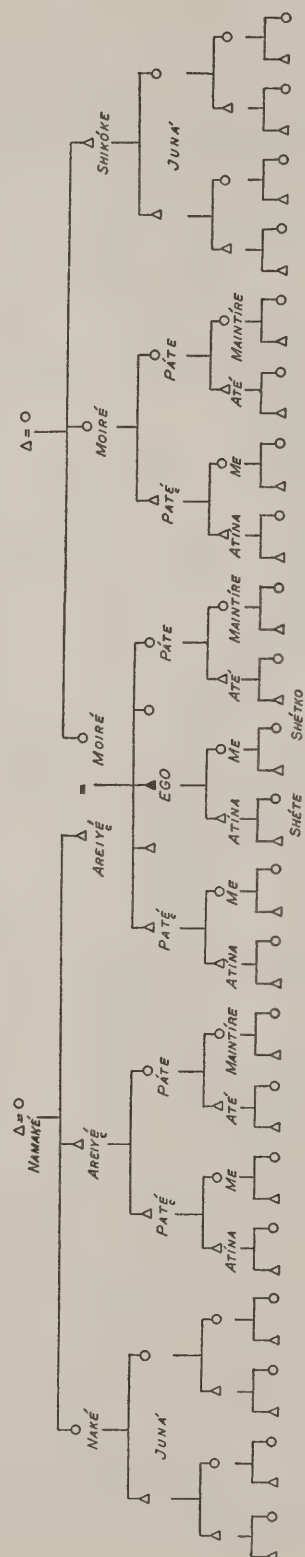


CHART 13.—Nambicuara, unrelated (?). Husband, Amesiziu. Wife, Azezu. Father-in-law, Asunusu. Mother-in-law, Ahainusu.

# IRANXE

BLOOD RELATIVES—MAN SPEAKING



AFFINAL RELATIVES—MAN SPEAKING

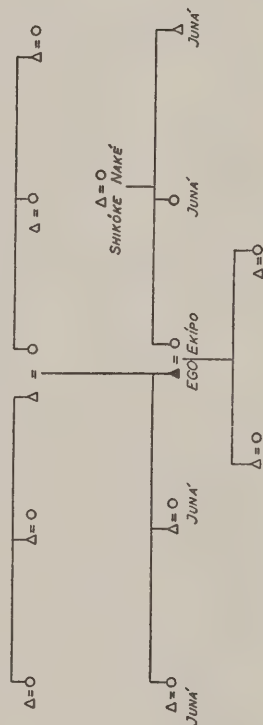


CHART 14.—Iranxe, possibly Arawak-speaking. Husband, Intuma.

# APPENDIX 1

## RESOURCES OF THE NAMBICUARA

### AGRICULTURAL FOOD PLANTS

Portuguese name	English name	Scientific name	Nambicuará name
Amendoim	Peanuts	<i>Arachis hypogaea</i>	Wáikisu.
Araruta	Arrowroot	<i>Maranta arundinacea</i>	Yeláosu.
Batata doce	Sweetpotatoes	<i>Ipomoea batatas</i>	Wisu.
Cará		<i>Dioscorea</i> sp.	Ha'kisu.
Fava	Beans	<i>Phaseolus lunatus</i>	Kwá'su.
Mandioca brava	Manioc	<i>Manihot esculento</i>	Walídnisu.
Milho	Maize	<i>Zea mays</i>	Kayátsu.

### AGRICULTURAL NONFOOD PLANTS

Algodão	Cotton	<i>Gossypium</i> sp.	Kúunsu.
Fumo	Tobacco	<i>Nicotiana tabacum</i>	E'tsu.
Cabaça	Gourd	<i>Lagenaria siceraria</i>	Kad'é'henesu.
Urucú		<i>Bixa orellana</i>	D'unákasu.

### WILD FOOD PLANTS (FRUITS)

Ananás	Pineapple	<i>Ananas comosus</i>	Kuáhlú.
Babaçú		<i>Orbignya martinana</i>	Wains'kisu.
Bacaba		<i>Oenocarpus bacaba, distichus</i>	Wédnsu.
Bocaiuva		<i>Acrocomia eriocantha</i>	Halún'kisu.
Burití (nuts)		<i>Mauritia flexuosa; M. vinifera</i>	Héeru.
Cajú-do-campo	Savanna cashew	<i>Anacardium nanum</i>	E'hru.
Cajú-do-mato	Forest cashew	<i>Anacardium giganteum</i>	Daunl'kisu.
Cumbarú		<i>Dipteryx odorata</i>	Najgisu.
Fruta-de-lobo		<i>Solanum lycocarpum</i>	Kúnakisú.
Jaboticabeira	Jaboticaba tree	<i>Eugenia cauliflora</i>	Alihún'isu.
Mangabeira	Mangaba tree	<i>Hancornia speciosa</i>	Shikiál'igosu.
Marmeleiro-do-campo	Quince tree	<i>Maprounea brasiliensis</i>	Táohlu.
Marmeleiro-de-espinho	do	do	Kad'i'kisu.
Marmeleiro	do	do	Walí'kisu.
Marmeleiro	do	do	Halu'kisu.
Piquiseiro	Piqui tree	<i>Caryocar brasiliensis</i>	A'hru.
Petalas brancas de arbusto			Alúnyatsu.

### WILD PLANTS USED IN MANUFACTURE

Burití		<i>Mauritia flexuosa; M. vinifera</i>	Yélasu.
Camaiuva		<i>Guadua</i> sp.	Kadíkatsu.
Cipó		<i>Philodendron imbe</i>	Kasésu.
Piúva-da-mata (Parápará)		<i>Jacaranda copaia</i>	Hala'su.
Sapé		<i>Imperata brasiliensis, contracta</i>	Kadekídansu.
Seringueira	Rubber tree	<i>Hevea brasiliensis</i>	Walíkikatsu.



## WILD PLANTS USED IN MANUFACTURE—Continued

Portuguese name	English name	Scientific name	Nambicuará name
Siriva.....		<i>Syagrus speciosa</i> .....	Dugndúgatsu.
Taquara para ponta de flecha.....	Bamboo for arrowheads.....		Kayéasu.
Taquara para flauta secreta.....	Bamboo for sacred flute.....		Ka'd'inensu.
Taquara para panpipe.....	Bamboo for panpipe.....		Wasingatsu.
Tucum.....		<i>Astrocaryum tucuma</i> .....	Haló'tsu.

## PLANTS USED FOR DRUGS AND POISON

Timbó.....		<i>Paullinia pinnata</i> .....	Kúuntu.
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## PLANTS USED IN VARIOUS ECONOMIC WAYS

Lixeira.....			Kalínasu.
Embira.....			Sa'hlu.

## MAGICAL PLANTS

Paratudo.....			Inháuködãosu.
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ANIMALS HUNTED FOR FOOD<sup>2</sup>

Anta.....	Tapir.....	<i>Tapirus terrestris</i> .....	Alúnsu.
Ariranha.....	Otter.....	<i>Pteronura brasiliensis</i> .....	Díwisu.
Bugio.....		<i>Alouatta ursina</i> .....	Ihru.
Caitetú.....	Peccary.....	<i>Tayassu pecari</i> .....	Y'ákisu.
Camondongo.....	Mouse.....	<i>Mus musculus</i> .....	Súuhlu.
Capivara.....	Capybara.....	<i>Hydrochoerus hydrochaeris</i> .....	O'nsu.
Coatí.....	Coati.....	<i>Nasua narica</i> .....	Kaisu.
Cotia.....	Rodent.....	<i>Dasyprocta aguti</i> .....	Dúhru.
Cuatá.....		<i>Ateles ater</i> .....	Hósadasu.
Cuxio.....		<i>Ateles paniscus</i> .....	Kalínsu.
Jaguaririca.....		<i>Felis pardalis chibiquazu</i> .....	Ianaráwidnsu.
Lontra.....	Otter.....	<i>Lutra paranensis</i> .....	Kwantnáisu.
Macaco-prego.....	Monkey.....	<i>Cebus apella</i> .....	Hótsu.
Onça parda.....	Brown panther.....	<i>Felis concolor</i> .....	Ianaránenensu.
Onça pintada.....	Jaguar.....	<i>Felis onca</i> .....	Ianarátasu.
Ouriço.....		<i>Coendou prehensilis</i> .....	Holoótasu.
Paca.....		<i>Cuniculus paca</i> .....	Úlutsu.
Porco do mato.....			Yákadesu.
Preguiça.....		<i>Bradypus tridactylus</i> .....	Aláisu.
Rato do chapadão.....		<i>Scapteromys gnambiquarae</i> .....	Nótasu.
Saguí-piranga.....		<i>Midas rosalia</i> .....	Takísu.
Tamanduá-bandeira.....		<i>Myrmecophaga jubata</i> .....	Díklisu.
Tamanduá-mirim.....		<i>Cyclopes didactylus</i> .....	Wáínsu.
Tatú-bola.....	Armadillo.....	<i>Tolypeutes tricinctus</i> .....	Núunsu.
Tatú-canastra.....		<i>Priodontes giganteus</i> .....	Wahrúru.
Tatú-cascudo.....			Sunaisu.
Tatú-liso.....			A'hru.
Tatú-15-quilos.....			A'látasu.
Veado campeiro (a).....	Deer.....		Yetáhru.
Veado campeiro (b).....	do.....		Whídisu.
Veado mateiro.....		<i>Majama rufa</i> .....	Kuáklistu.

<sup>2</sup> Other rats yet unidentified are also eaten.

## OTHER ANIMAL FOODS COLLECTED

Portuguese name	English name	Scientific name	Nambicuará name
Gafanhoto	Grasshopper	<i>Saltatórios</i>	Klósusu.
Jacaré	Cayman	<i>Caiman</i>	Wáklisu.
Jaboti		<i>Testudo tabulata</i>	Yutánhru.
Jibóia	Boa constrictor	<i>Constrictor constrictor</i>	Wáikisu.
Lagartixa	Lizard	<i>Anisolepsis</i>	Yenalákadasu.
Lagarto	do		Sínsu.
Larvas de abelha (Jatí)			Waiawénisu.
Larvas de bezouro em buriti			Hínasu.
Larvas de bezouro em taquara			Alukínasu.
Larvas de bezouro em pau podre			Netláhátlasu.
Mel	Honey		Du'su.
Sauva	Ant	<i>Oecodoma cephalotes</i>	Sawádnusu.
Sucuri	Anaconda	<i>Eunectes murinus</i>	D'ihedasu.
Tracajá	Turtle	<i>Podocnemis dumeriliana</i>	Hadíkisu.

## BIRDS \*

Arara	Macaw	<i>Ara ararauna</i>	Alaõsu.
Ema	Rhea	<i>Rhea americana</i>	D'a'su.
Gavião (all species)	Hawk		Tauptú.
Jacú		<i>Cracides</i>	Ala'su.
Jacutinga		<i>Cumana jacutinga</i>	Kwáýisu.
Jaó		<i>Tinamus noctivagus</i>	Wahótasu.
Macuco		<i>Tinamidas</i>	Aítsu.
Mutum		<i>Crax alector</i>	Wítisu.
Papagaio	Parrot		A'hlu.
Perdiz	Partridge	<i>Rhynchotus rufescens</i>	Halutcheenggisu.
Periquito (grande)	Parakeet		Sawihru.
Periquito (verde)	do		Kanéikisu.
Pombo carijó	Pigeon		Kwasá'su.
Rolinha		<i>Columbina picui picui</i>	Wěsu.
Seriema		<i>Cariama cristata</i>	Kwalátsu.
Tucano (grande)		<i>Ramphastidae</i>	Yeladndasu.
Tucano (pequeno)		do	Yelásu.

## FISH

Peixe	Fish		Áidnsu.
Jaú		<i>Paulicea lutkeni</i>	Kwíhru.
Lambari		<i>Tetragonopterus jenynsi</i>	Háru.
	Long-tailed fish		Ayúlunasu.
Matrinchão		<i>Brycon brevicauda</i>	Wasíkisu.
Pacú		<i>Prochilodus</i>	Kalá'tsu.
Piava			Ũklusu.
Robafo (Traira)		<i>Hoplias malabaricus</i>	Aidndasu.

\* All birds are eaten except the walósu (urubú).



## APPENDIX 2

### BORORO KINSHIP SYSTEM

The Bororo are divided into two exogamous matrilineal moieties—*Cheráide* and *Tugarégede*. A man in the *Tugarégede* moiety calls all men of his own moiety *tugarége* and all women *tugarére*. He calls men of the *Cheráide* moiety *cheráí* and women *cheráre*. One's opposites can be collectively called *yorubúlare*, or if they are small children, *yorubúdarédrogo*; *drógo* meaning little.

There are actually few classificatory terms in the Bororo kinship system. In a general way all men of the opposite side are fathers (*yógwa*). Generation lines are largely ignored. If the *yógwa* is old he becomes a grandfather (*yógwapéga*). If one marries *yógwa*'s sister he becomes one's brother-in-law (*nodóu*). Men younger than one's self are called *mede* (boy) or son of the opposite moiety.

Women of the opposite side are called mothers-in-law (*imarúga*). They are potential wives. If old they are grandmothers (*imarúgapega*). That is, one's father's mother is *imarúgapega*, one's father's sister is *imarúga*, her daughter is *imarúga*. Women younger than one's self are termed *aréde*, girl or daughter of the opposite moiety. One of these women one marries, she may be *imarúga* or *aréde*, and she becomes one's *toredúche*, wife. Her mother becomes *imarúga*.

In one's own moiety the men are generally classed as brothers (*imána*) with distinctions for younger and older brother (initiated or uninitiated). Older men are *imánapega* or *yedága*, father-in-law or initiator. Grandfather is *yedágapega*; mother's brothers are *yedága*; father's sister's

daughter's husband is also *yedága*. Boys are *mede*, girls are *aréde*. When they get married one's sister's children become *iwagéda*, moiety-son; and *irágo*, moiety-daughter. *Iwagéda* is also one's son-in-law (daughter's husband).

In one's own moiety women are mothers, *imúga*; sisters before puberty, *itwíye*; and sisters after puberty, *irágo*.

Children before puberty are just *mede* (boy) and *aréde* (girl); after puberty boys and girls of one's own moiety become *iwagéda* and *irágo*, moiety-son and moiety-daughter or son-in-law and daughter-in-law. One's own son and daughter are called *méde* and *aréde*. These terms are extended to brother's sons and daughters and to sister's sons and daughters. They mean boy and girl especially when *drógo* (little) is added.

At puberty a boy goes through an initiation rite which incorporates him into his own moiety. After this, sister's son is called *iwagéda*. After the ear-piercing ceremony sister's daughter is called *irágo*.

#### *Cheráide* clans

1. Bokodóri.
2. Bakóro.
3. Badójebage.
4. Kiédo.
5. Borótcherá.
6. Óchera.

#### *Tugaréde* clans

1. Arári.
  - a. Arurécha búgi wúgi.
  - b. Arurécha tchibúgiwúgi.
2. Iwágudodgi.
  - a. Tohóreu.
  - b. Kúdjagureu.
3. Apibóregi.
4. Ipayédo.

## APPENDIX 3

# Anthropometry of the Umotina, Nambicuara, and Iranxe, with Comparative Data from Other Northern Mato Grosso Tribes

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In 1949, Kaoro Onaga, under the supervision of Dr. Oberg, measured 22 Umotina (14 males, 8 females), 13 Eastern Nambicuara (7 males, 6 females) of the Waktítisu band, and 5 Iranxe males. The Umotina were measured at Barra dos Bugres, the Nambicuara and Iranxe at Utiarity. Small as these series are, they represent relatively large samples of the groups from which they are drawn. The total Umotina population is about 65, with 34 adults (see p. 106); the Waktítisu band numbers only 18, and the Eastern Nambicuara together total only about 130 (see p. 86). No figures on the Iranxe are available but they are definitely a remnant group.

The drastic reduction of even the most secluded aboriginal populations in Brazil enhances the value of physical studies already made on them. The present contribution to the physical anthropology of northern Mato Grosso may be added to the earlier studies by Ehrenreich (1897), Ranke (1910), and Roquette-Pinto (1935). In addition, the Museu Nacional in Rio de Janeiro has unpublished physical data on some of the Upper Xingú tribes, particularly the Camayurá. Vellard (see Imbelloni, 1948, p. 237, ftn.) has unpublished information on three Nambicuara bands. Willems (personal communication) is in the possession of measurements on 40 male Tapirapé. A careful analysis of all these studies should go far in rounding out the physical anthropology of northern Mato Grosso. In the meantime, I have endeavored to fit the Umotina, Nambicuara, and Iranxe series into the existing knowledge of the area.

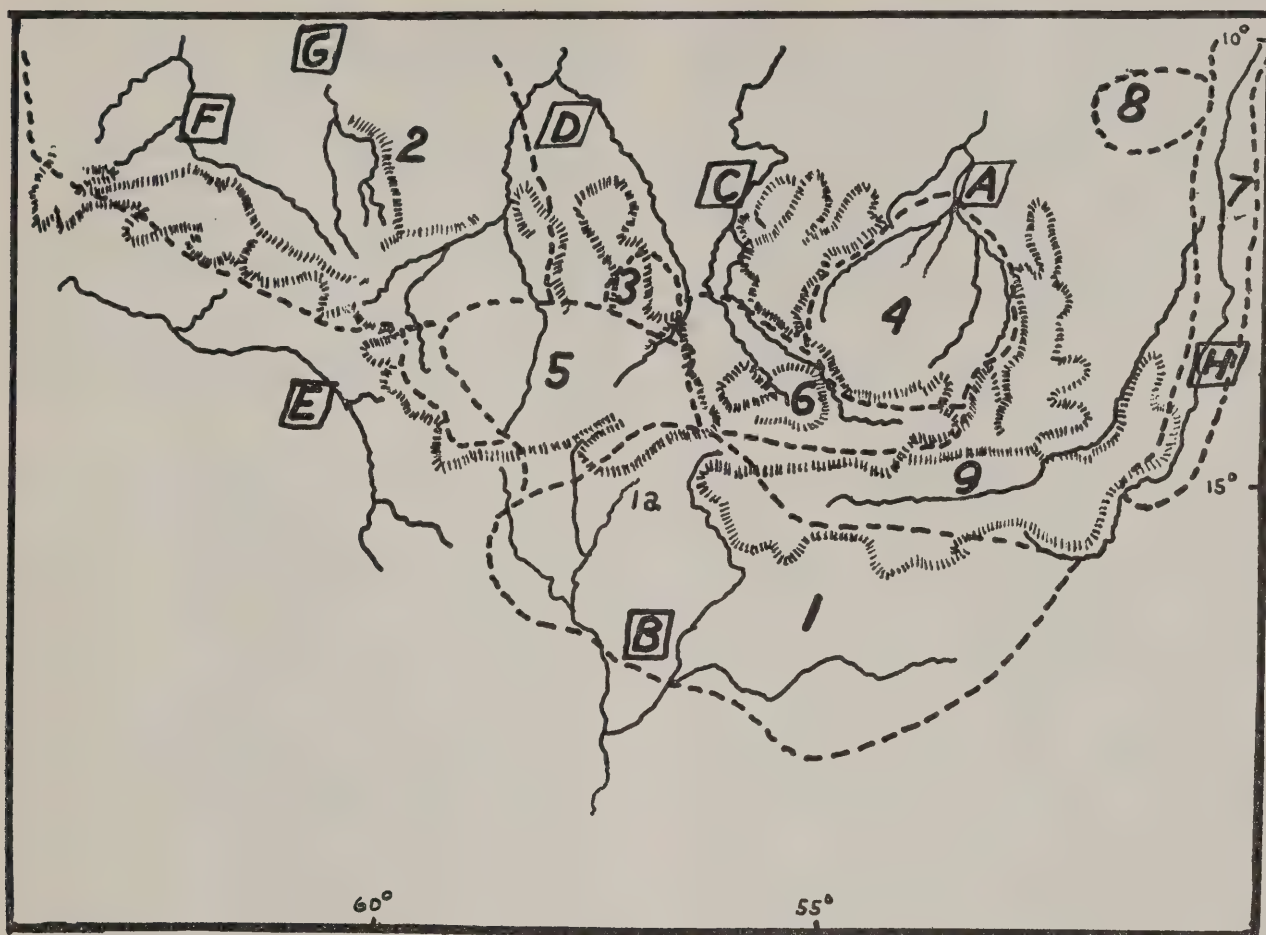
## GEOGRAPHICAL RELATIONS

Most of the series measured in northern Mato Grosso are from tribes in the Upper Xingú Basin (maps 1, 3). These are the Auetí, Trumai, Bacairí, Nahuqua, and Camayurá. Their present locations are indicated in map 2, (p. 5), and data on their earlier shiftings are given by Lévi-Strauss (1948, p. 322-323). As Oberg has said (p. 6), the fanlike network of rivers constituting the drainage basin of the Upper Xingú River affords no natural barriers and makes for easy intertribal communication by water. But the limits of the Upper Xingú Basin to the east, west, and south are marked by the sandstone plateaus of the Brazilian Shield. These barriers tend to isolate the Basin from the outside world, thus fostering its development as a riverine cultural unit (p. 7).

West of the Upper Xingú Basin, on the semiarid plateau, the Serra do Parecís, are the Paressí, Iranxe, and Eastern Nambicuara. In earlier times, most of these people were concentrated along the "galeria" forests bordering the headwaters of rivers originating on the plateau. The location of the Iranxe at white contact was immediately north of the Paressí. The Nambicuara were thinly scattered in the less habitable areas west of the Paressí. In contrast to the more populous Upper Xingú tribes, the Paressí, Iranxe, and Eastern Nambicuara are now remnant groups.

Across the semiarid plateau, or Planalto do Matogrosense, which forms the southern barrier





MAP 3.—Schematic map of approximate tribal locations in relation to topography and drainage systems in northern Mato Grosso. Dotted lines indicate tribal boundaries at time of contact (after Steward and Mason, 1950). Hachures indicate the general conformation of the Planalto do Matogrosense. Tribes: 1, Bororo; 1a, Umotina; 2, Nambicuara; 3, Iranxe; 4, Upper Xingú tribes; 5, Paressí; 6, Bacairí; 7, Carajá; 8, Tapirapé; 9, Cayapó. Drainage systems (simplified): A, Upper Xingú; B, Upper Paraguay; C, Paratinga-Verde; D, Arinos-Papageio; E, Guaporé; F, Gy-Parapa; G, Theodore Roosevelt; H, Araguaia.

of the Upper Xingú Basin, lived the Bororo. With the Guató and others, the Bororo occupied the headwaters of the Upper Paraguay River. As a Bororo subtribe, the Umotina formerly lived between the headwaters of the Upper Paraguay and Sepotuba rivers (Lowie, 1946, p. 419). The São Lourenço group of Bororo, measured by Ehrenreich, inhabited the upper and middle reaches of the São Lourenço River.

To the east of the Upper Xingú Basin, along the Araguaia River, are the Carajá. They are included in this analysis less for their geographic position than for their metric similarity to the Umotina.

#### APPRAISAL OF MIXTURE

Oberg (personal communication) has indicated that no subject with detectable neo-Brazilian admixture was included in the series. The Eastern Nambicuara have had occasional contact with neo-Brazilians only since 1912, and appreciable mixture is most unlikely. While the Umotina have been peaceable only since 1913 (Lowie, 1946, p. 419), Oberg indicated there is a possibility of some neo-Brazilian admixture there, but that such admixture could hardly account for their extreme long-headedness (mean male cephalic index 73.0). This is most reasonable since

Willems (personal communication) indicates that no neo-Brazilian series within his knowledge averages less than about 79, even though the Portuguese are the most long-headed nationality in Europe. However, several of the younger Umotina adults show shorter statures and rounder heads<sup>1</sup> than the rest of the series. This suggests some admixture in the Umotina since 1913. Yet Oberg's morphological descriptions (see p. 134) and photographs (pls. 9, 10) give the strong impression that the Umotina as a whole are unmixed. Blood group analyses, such as Da Silva (1949, p. 8) has made on other Brazilian groups, are needed for confirmation.

No specific statement has been made concerning the racial purity of the Iranxe. They are a secluded and little-known tribal remnant, whose status is probably comparable to that of their neighbors, the Paressí.

For the Upper Xingú Basin, it seems quite certain that at least those tribes recently blood grouped by De Lima (1950) are unmixed with neo-Brazilians. De Lima studied 377 Upper Xingú Indians—109 Bacairí, 60 Camayurá, 81 Nahuqua, 47 Mehinacu, and 80 Waurá—and found them to be exclusively group O, except for one Bacairí woman with a known neo-Brazilian father. These blood-group determinations, coupled with the secluded position of the Upper Xingú Basin, render it definite that no appreciable neo-Brazilian admixture has occurred there. Furthermore, the Basin was first explored by Von den Steinen's expedition of 1884. Since Ehrenreich was a member of this expedition, his measurements are doubly certain to be of "pure" Indians.

Because of the early date of his work, Ehrenreich's measurements on the Paressí and Bororo should represent largely, if not wholly, unmixed Indians, although the Paressí have had contact with neo-Brazilian slave hunters and others since the early 18th century (Métraux, 1948, p. 180). Serological confirmation of the unmixed status of the São Lourenço Bororo, the same group measured by Ehrenreich, lies in their uniform possession of blood group O (Da Silva, 1949, p. 579). The status of the Carajá is less certain. They have been in

contact with neo-Brazilians since 1682 (Lipkind, 1948, p. 180). Golden's (1930) serological work on 61 Carajá indicates a really extraordinary frequency of the gene for group B. At first glance, this suggests admixture. Since there is some question as to the technical validity of Golden's determinations (Boyd, 1950, p. 92) it is safer not to use his results as evidence of admixture, or for calculations as to the proportions of the mixing populations. It is important, however, to note that Ehrenreich's measurements of the Carajá were made over 60 years ago, when they were presumably less mixed than when Golden studied them.

Whereas neo-Brazilian admixture can be assumed to have little or no effect upon the tribes whose measurements are considered here, the same cannot be said of intertribal mixture. For example, Oberg believes "... that a certain amount of admixture has taken place among the Upper Xingú tribes for a long time" (p. 15). At the time of his visit, about 15 of the 110 Camayurá were from other tribes (p. 15). Tribal shiftings within the Upper Xingú Basin occurred both before and after Von den Steinen's visit, and the general trend has been toward tribal intermixture and concentration of population along the river banks (Lévi-Strauss, 1948, p. 323). Over a long period of time, this sort of genetic exchange would tend to level any physical differences originally present among the tribes of the Upper Xingú Basin.

Intertribal admixture centering around the Paressí has also been recorded. In fact, one large Paressí subgroup, the Cozarini, "... seem to be a mixed tribe formed by a nucleus of Paressí invaders who absorbed and assimilated Indians from other tribes, mainly Nambicuara . . . . As recently as 1910 . . . the Cozarini still fought the Nambicuara and kidnapped the men for slaves and the women for wives" (Métraux, 1948, p. 349). Other Paressí groups may be considered less mixed with surrounding Indians.

No evidence could be located concerning intertribal admixture in the Bororo, although it must have taken place in the past. It is, however, highly unlikely that the Bororo were ever in contact with the Upper Xingú and other tribes directly to the north across the Planalto do Matogrosense. As for the Carajá, they have traditionally accepted captured women and small children as full tribal

<sup>1</sup> In the male series, field Nos. 9 and 11, respectively estimated at 24 and 22 years of age, have statures of 161 and 162 cm., cephalic indices of 79.9 and 90.4. Nos. 6 and 7 of the female series, 19 and 17 years old, show corresponding figures of 152 and 164 cm., and 88.1 and 82.8. From the photographs, No. 6 (pl. 10, a), at least, has the appearance of being mixed.



members, and since prehistoric times have maintained themselves against hostile neighbors (Lip-kind, 1948, p. 188).

### APPRAISAL OF ANTHROPOMETRIC TECHNIQUES

Oberg followed Sullivan (1923) in teaching his students to measure, and added head height, minimum frontal and bigonial diameters, sitting height and several other dimensions (tables 1, 2). A Martin-type anthropometer, and sliding and spreading calipers were used. Oberg instructed his students to press the instruments quite tightly over the soft parts in taking a measurement. He periodically checked Onaga's measurements and found they compared very closely with his own.

Oberg suspected that his own location of nasion was low, since he selected the deepest point at the root of the nose. The low means for facial and nasal heights in the Umotina, Nambicuará, and Iranxe series bear out this suspicion. Oberg also felt that perhaps he did not achieve a true minimum in the minimum frontal diameter. This seems likely, since the means of the present series are high for this dimension. Head height was taken with the detached segment of the anthropometer from trignon to vertex. For sitting height, the Umotina subjects were seated on a chair, with their feet on the ground. The Nambi-

cuara and Iranxe sat on a table for the measurement, and presumably had no footrest. In table 1, arm length was calculated by subtracting dactylion height from acromial height; leg length, by subtracting sitting height from stature. The latter, somewhat unorthodox, procedure was used to achieve figures comparable to those of Ranke.

The techniques of the other investigators are more comparable to those of Oberg and Onaga than might be expected. Ehrenreich chose a low location for nasion, on the average of 6 mm. below that of Ranke (1910, p. 95). Judging by Roquette-Pinto's low means for facial and nasal heights (table 1), he also deviated in that direction. It seems most probable that the facial and nasal dimensions measured by Onaga, Ehrenreich, and Roquette-Pinto are closely comparable, although Ranke's higher location for nasion is more in line with orthodox modern procedure. After consulting Ehrenreich, Ranke felt that the only strictly comparable measurements between them were stature, head length, head breadth, bizygomatic breadth, and nasal breadth (Ranke, 1910, p. 98). He considered Ehrenreich's arm lengths overlong and his biacromial breadths overwide, suggesting that Ehrenreich did not get close enough to the bony landmarks. If anything, Oberg's techniques were in the same direction.

TABLE 1.—Male means for various northern Mato Grosso tribes <sup>1</sup>

Measurements and indices	Tribe and investigator indicated													
	Iranxe		Aueti				Trumai				Paresse		Bacairi	
	Oberg		Ranke		Ehrenreich		Ranke		Ehrenreich		Ehrenreich		Ehrenreich	
	No. <sup>2</sup>	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
Stature (in cm.)	5	153.6	24	158.1	14	159.9	14	159.9	7	159.2	9	160.5	10	160.8
Sitting height (in cm.)	5	78.6	24	81.3			14	80.7						
Biacromial breadth (in mm.)	5	34.2	24	37.0	14	39.0	14	35.5			9	40.1	10	37.7
Arm length (in mm.)	5	70.3	24	68.9	14	73.3	14	70.5			9	75.8	10	74.0
Leg length (in mm.)	5	75.0	24	76.8			14	78.8						
Head length (in mm.)	5	181.2	24	185.6	14	187.1	14	182.0	7	179.0	9	188.1	10	186.5
Head breadth (in mm.)	5	143.4	24	148.8	14	148.4	14	149.0	7	145.4	9	145.9	10	147.0
Head height (in mm.)	5	121.2			14	122.3			7	126.1	9	117.9	10	120.6
Minimum frontal diameter (in mm.)	5	102.8			14	108.9			7	105.2	9	108.9	10	108.0
Morphological face height (in mm.)	5	109.8	24	121.3	14	115.6	14	122.7	7	111.1	9	116.9	10	117.1
Bizygomatic breadth (in mm.)	5	133.6	24	137.0	14	134.2	14	134.6	7	131.4	9	135.7	10	132.2
Bigonial breadth (in mm.)	5	97.2			4	103.2					9	100.2	10	97.8
Nasal height (in mm.)	5	48.2	24	56.1	4	45.4	14	55.3			9	49.6	10	47.5
Nasal breadth (in mm.)	5	39.4	24	39.0	4	39.0	14	40.4			9	39.2	10	39.6
Length-breadth index	5	79.2	24	80.2	14	79.6	14	81.9	7	81.6	9	77.5	10	79.0
Length-height index	5	66.9			14	65.3			7	70.5	9	62.4	10	65.6
Breadth-height index	5	84.4			14	82.2			7	86.7	9	80.8	10	82.0
Morphological face index	5	82.1	24	88.5	14	86.3	14	91.2	7	84.6	9	85.9	10	88.2
Nasal index	5	81.9	24	69.5	4	76.1	14	73.1	7	75.5	9	79.2	10	84.7

TABLE 1.—Male means for various northern Mato Grosso tribes<sup>1</sup>—Continued

Measurements and indices	Tribe and investigator indicated															
	<i>Nahuqua</i>				Eastern Nambicuara				<i>Camayurá</i>		Bororo				Carajá	
	Ranke		Ehrenreich		Roquette-Pinto		Oberg		Ehrenreich		Oberg		Ehrenreich		Ehrenreich	
	No. <sup>2</sup>	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean	No.	Mean
Stature (in cm.)	65	161.8	15	162.1	18	162.0	7	159.6	14	164.3	14	168.0	20	173.7	12	168.9
Sitting height (in cm.)		83.8					7	81.3			14	84.9				
Biacromial breadth (in mm.)	65	37.1	4	39.2			7	35.1	4	40.1	14	36.8	20	41.6	12	37.4
Arm length (in mm.)	65	70.3	5	73.6			7	69.8	14	77.6	14	75.6	20	80.2	12	77.6
Leg length (in mm.)	65	78.1					7	78.5			14	83.0				
Head length (in mm.)	65	185.2	15	188.0	18	184.0	7	178.3	14	184.8	14	196.3	20	190.4	12	191.2
Head breadth (in mm.)	65	147.3	15	151.1	18	140.0	7	138.0	14	146.6	14	142.9	20	154.5	12	142.8
Head height (in mm.)			15	126.7			7	126.0	14	119.6	14	134.6	20	129.1	12	128.4
Minimum frontal diameter (in mm.)			5	107.6	18	99.0	7	103.4	4	108.2	14	109.1	20	118.3	12	113.3
Morphological face height (in mm.)	65	120.0	15	115.6	16	110.0	7	108.7	14	114.3	14	120.6	20	120.4	12	125.3
Bizygomatic breadth (in mm.)	65	136.4	10	130.5	13	134.0	7	134.6	14	131.9	14	140.3	20	147.2	12	140.0
Bigonial breadth (in mm.)			5	106.8			7	104.3	4	101.5	14	104.6	20	109.3	12	106.7
Nasal height (in mm.)	65	53.1	5	45.4	18	47.0	7	45.6	4	48.2	14	48.6	20	49.0	12	48.4
Nasal breadth (in mm.)	65	40.5	5	39.2	18	40.0	7	38.7	4	38.0	14	42.5	20	42.4	12	41.6
Length-breadth index	65	79.5	15	80.6	18	76.0	7	77.4	14	79.3	14	73.0	20	81.2	12	74.7
Length-height index	65		15	67.4			7	70.8	14	65.3	14	68.7	20	68.1	12	67.7
Breadth-height index			15	83.8			7	91.5	14	81.6	14	84.4	20	83.5	12	89.9
Morphological face index	65	88.0	10	87.1	11	82.5	7	80.9	14	86.7	14	86.1	20	81.8	12	89.5
Nasal index	65	75.4	5	86.3	18	85.0	7	84.6	14	78.6	14	87.6	20	87.2	12	86.2

<sup>1</sup> Upper Xingú Basin tribes are indicated in italics. The linguistic affiliations of the tribes are as follows: Arawak—Iranxe (?), Parese; Carib—Bacairí, Nahuqua; Tupi—Auetí, Camayurá; independent—Bororo, Carajá, Nambicuara, Trumai.

<sup>2</sup> No.—Number of individuals measured.

The means for the present series are given in tables 1 and 2. Individual measurements are recorded on microfilm filed in the Division of Physical Anthropology, United States National Museum.

TABLE 2.—Mean measurements, and indices of Umotina, Nambicuara, and Iranxe series

Measurements and indices	Umotina		Nambicuara		Iranxe
	14 males	8 females	7 males	6 females	
Stature (in cm.)	168.0	155.6	159.6	148.6	153.6
Acromial height (in cm.)	138.8	128.4	130.8	122.1	127.7
Dactylion height (in cm.)	75.5	59.5	69.8	56.6	57.4
Sitting height (in cm.)	83.0	80.8	78.5	76.3	78.6
Suprasternale height (in cm.)	136.9	127.7	129.7	121.2	127.5
Biacromial breadth (in mm.)	368.1	339.9	350.9	310.0	341.6
Chest breadth	295.9	261.5	269.6	244.8	264.2
Chest depth	231.9	197.6	211.3	201.3	200.4
Maximum hip breadth	287.9	260.9	243.3	239.5	242.4
Head length	196.3	183.1	178.3	171.0	181.2
Head breadth	142.9	137.5	138.0	133.5	143.4
Head height	134.6	130.2	126.0	121.2	121.2
Minimum frontal diameter	109.1	105.9	103.4	105.0	102.8
Bizygomatic breadth	140.3	132.9	134.6	126.5	133.6
Bigonial breadth	104.6	98.0	104.3	96.3	97.2
Morphological face height	120.6	110.1	108.7	102.2	109.8
Nasal height	48.6	43.1	45.6	40.7	48.2
Basal breadth	42.5	37.1	38.7	33.2	39.4
Relative sitting height	50.6	52.0	50.8	51.2	51.2
Relative trunk length	32.0	34.0	32.1	32.8	34.2
Relative leg length	49.5	48.0	49.2	48.8	48.8
Relative arm length	45.0	44.4	43.8	44.2	45.8
Relative biacromial breadth	21.9	21.8	21.9	20.9	22.2
Relative hip breadth	17.2	17.5	15.5	16.0	15.8
Thoracic index	78.4	75.4	78.4	82.7	75.9
Length-breadth index	73.0	75.9	77.4	78.2	79.2
Length-height index	68.7	71.1	70.8	71.0	66.9
Breadth-height index	94.4	94.1	91.5	90.7	84.4
Cephalo-facial index	98.2	95.9	97.8	94.5	93.2
Fronto-parietal index	76.6	76.6	74.9	78.7	71.7
Zygo-frontal index	77.8	79.6	76.9	83.0	77.0
Zygo-gonial index	74.6	73.9	77.5	76.2	72.7
Morphological facial index	86.1	83.0	80.9	80.9	82.1
Nasal index	87.6	86.4	84.6	81.7	81.9

## APPRAISAL OF PHYSICAL DATA

Metrically, the tribes of the Upper Xingú Basin appear to be much alike (table 1). This is the more surprising since from the small number of subjects in all but Ranke's Nahuqua (Nahukwa) series one would expect unrepresentative samples and divergent mean figures. It is especially noteworthy that, after due allowances for technical differences are made, Ehrenreich's and Ranke's means for the Auetí, Trumai, and Nahuqua are very similar indeed. Taken as a group, the Upper Xingú series have a mean range in stature of 158–164 cm., with the Camayurá the tallest. The mean cephalic indices cluster closely around 80. All Ehrenreich's series are rather low-headed, with means from 82–87 in the breadth-height index. The highest mean (86.7), possibly a real indication of difference (see below), comes from 7 Trumai males. Ehrenreich's mean facial indices are medium, ranging from 84–87, while Ranke's three series have means of 88 and over, and are probably more correct (p. 131). The same is true of the mean nasal indices, which, for Ehrenreich's series range from 75–78, within the medium category; for Ranke's, from 69–75. The similarities between the Upper Xingú series, on this crude metric basis, suggest that they represent a single racial unit, or part of one. But since Ehrenreich



(1897, pp. 90–91), largely on the basis of facial morphology, characterized the Trumai as a people apart, with their closest racial ties probably in the Chaco, they may not properly belong to the Upper Xingú racial unit. Corroborative of Ehrenreich's view is the Trumai claim that they are newcomers from the south (p. 7).

The uncertain status of the Trumai is hardly clarified by Imbelloni and his student, Paulotti, who themselves are not in agreement. Probably on the basis of Ehrenreich's remarks, Imbelloni asserted that the Trumai, along with other "grupos vestigiales" in upper South America—

are distinguished no less clearly by their biological characters: by a skin color perceptibly darker than their agricultural neighbors, and in a few cases lighter, by more disagreeable and cruder facial features, the nose with fleshy and puffy alae, and above all, by a perceptible difference in stature, since their means cluster around 150 cm., and are even less in tribes free from contamination [Imbelloni, 1948, p. 225; translation mine].

Table 1, however, indicates that the mean stature of the Trumai is closer to 160 than to 150 cm., and that they are no shorter than their Tupi-speaking Auetí neighbors. Furthermore, neither Ehrenreich nor Ranke credit the Trumai with skin pigmentation different from that of the other Upper Xingú tribes. It is therefore apparent that Imbelloni's generalization goes beyond the evidence at hand. Contrary to this generalization, Paulotti (1948, p. 84 ftn.) selected the Trumai, because of their allegedly low stature and round heads, as an example of the *Amazónido* physical type in the Upper Xingú basin. This type, according to Imbelloni's (1938, p. 238) examples, is a recent arrival in South America most commonly found in Tupí-, Carib- and Arawak-speakers. Yet in the same footnote, Paulotti discussed the presence of residual and archaic populations (*Láguido* and *Fuéguido*) in the Western Amazon, whose characteristically low stature and *long* heads crop out most strongly in the Trumai, among others! Now all we know about the head form of the Trumai lies in Ehrenreich's and Ranke's figures. Combining them into one mean cephalic index for 21 males, the result is 81.8, hardly long-headed.

If there is sufficient validity in Imbelloni's (1938, p. 238–239) *Amazónido* type, the Upper Xingú racial grouping should be part of it. Imbelloni's concept of the *Amazónido* type was

derived from Von Eickstedt's *Brazilide* type. Unfortunately Von Eickstedt (1934, p. 756) has also confused the picture by considering the Auetí and Nahuqua representative of the *Lagide* or *Lagoid* type. Bracketed with the Auetí and Nahuqua are the Carajá and Cayapó, and, further afield, the Botocudo and Alakaluf. In addition, the Bacairí are said to show Pampide influence (Von Eickstedt, 1934, p. 757). But no evidence for this is offered. Meager as the series in table 1 are, it seems preferable to use them as the basis for tentative conclusions rather than to indulge in the risky short cuts of second-hand impressionism.

Metrically, the Paressí series appears to tie in well with the Upper Xingú tribes, except that it is somewhat longer-headed, due possibly to assimilation of longer-headed Nambicuara. Tentatively, then, the Paressí may be included in the Upper Xingú racial unit, especially since Oberg (p. 69) has noted the close similarity of the Paressí to the Bacairí. Possibly the Iranxe would also fit into this unit, although the present sample does not adequately indicate it.

The metric position of the Nambicuara is not wholly clear from the present data. The two Nambicuara series are longer-headed than those from the Upper Xingú Basin, and possibly higher-vaulted (for Oberg's series), shorter-faced and narrower-nosed as well. Their skin color is perceptibly darker than the neighboring Paressí; in fact Oberg stated (personal communication) that when seen together swimming in the river, he could easily sort out the Nambicuara children on this basis. It is quite possible that the Nambicuara represent one of the living groups representative of the *Lagoa Santa* type (Newman, 1951, p. 90), but confirmation of this must await new findings by Vellard<sup>2</sup> and others.

Oberg (p. 69) has noted the decided contrast between the Upper Xingú and other tribes north of the Planalto do Matogrosense and the "large-framed, coarse-featured" Bororo and Guató to the south. This distinction is probably on a full racial level, as already indicated by Von Eickstedt (1934, p. 731) and Imbelloni (1938, p. 239) who place the latter people with the Pampide or *Pámpido* type of the Chaco and Pampas.

<sup>2</sup> Through Imbelloni (1948, pp. 235–236) we learn that in 1939 Jehan Vellard made physical studies on three Nambicuara bands: The Tagamani, a Roosevelt river group, and the Sabane. Mean stature for 12 male Nambicuara measured by Vellard is 162.9 cm.

It is curious that the Umotina series is metrically so different from Ehrenreich's São Lourenço Bororo. The former are considerably shorter-statured,<sup>3</sup> longer- and higher-headed, and absolutely and relatively narrower-faced. In these respects, the Umotina are much closer to the Carajá. Yet Oberg noted that the Umotina were lighter in skin color than the tribes north of the Planalto do Matogrosense, while Ehrenreich (1897, p. 79) considered the Carajá the darkest Indians he saw. Because of this and the following description by Oberg, I am hesitant to link the Umotina with people like the Carajá.

Oberg describes some of the Umotina as having flat Mongoloid faces combined with long heads. These long heads have prominent bun-shaped occiputs; narrow, sloping, pyramidal-shaped foreheads with no frontal bosses; and heavy brow-ridges. The position of glabella relative to nasion was higher than in the other groups he investigated. The upper integumental lip was long. Pronouncedly shovel-shaped incisors were not found. The Mongoloid fold of the eye was absent in some, pronounced in others (pls. 9, *a, d*; 10, *b, c*). Eye color was dark brown, but lacked the brightness noted in the Nambicuara and Caduveo (p. 85). Wavy hair was common, according to Oberg, but does not appear evident in the photographs (pls. 9, 10). Gray hair was observed only among the old women. Men past middle age showed a tendency for baldness, with recession of the hairline, and thinning of the frontal and temporal hair. Like the neighboring Guató, the old Umotina men had thin but not straggly beards. For this reason the Umotina have been long referred to as "Barbados" by neo-Brazilians.

These descriptions and the metric data suggest considerable physical variability within the Bororo group. Determination of the actual extent of this variability must await further studies.

### SUMMARY

While the Upper Xingú tribes under consideration and the Paressí may have had differing racial origins, the physical data collected over the past 50 years suggest that they now form a racial unit. Possibly the Iranxe could be added to this

unit, if there were more information concerning them. Largely because Ehrenreich (p. 132) considered the Trumai a people apart, I have hesitated to include them with their Upper Xingú neighbors. The racial unit proposed here seems to fit best as part of Von Eickstedt's Brazilide or Imbelloni's Amazónido groups. It is characterized by short stature and, in the Upper Xingú Basin at least, by an unusually heavy thorax and very muscular upper arms in contrast to less well-developed legs (Ehrenreich, 1897, p. 100). Head form verges on brachycephaly, and vault heights appear rather low for American Indians. Rather narrow faces predominate, and the nose seems medium-narrow, with a straight or convex bridge. Information on unexposed skin color is not available, but chances are that the Upper Xingú Basin people are rather lightly pigmented. Hair form is straight to low waved, with some curly hair, particularly among the Bacairí (Ehrenreich, 1897, p. 81). Bacairí men, however, are said to sometimes use wooden hair curlers (Lévi-Strauss, 1948, p. 327). Face and body hair are said to be sparse (p. 15).

The Nambicuara stand apart from the Upper Xingú Basin people in being longer-headed and possibly higher-vaulted, shorter-faced, and narrower-nosed. They are also perceptibly darker in skin color. There is a good chance that the Nambicuara represent a remnant of an old South American racial strain, possibly linking with Lagoa Santa.

In their greater stature and more rugged bodies and faces, the Umotina, along with other Bororo subtribes, are strikingly different from the more gracile Upper Xingú tribes and the Nambicuara. The Umotina are metrically much closer to the Carajá of the Araguaia River than they are to the São Lourenço Bororo. If the Umotina measurements are no more than slightly influenced by neo-Brazilian admixture, a greater physical variability exists among the Bororo than hitherto has been recognized. Whether the concept of the Pámpido race is sufficiently elastic to include the Umotina is a question best decided by Imbelloni and his coworkers.

Viewed from a geographic standpoint (see map 3), the physical anthropology of the Upper Xingú Basin tribes, the Nambicuara and the Bororo fall into an understandable pattern. The

<sup>3</sup> That the São Lourenço Bororo are not a selectedly tall series is suggested by Colbachini's (1942, p. 142) higher mean stature of 175.0 cm. for an Eastern Bororo group.



natural barriers forming the Upper Xingú Basin have fostered the formation of a cultural and racial unit, whatever the original differences between the tribes settling there may have been. Probably pertaining to this racial unit are the Paressí to the west. Conceivably the Iranxe, northern neighbors of the Paressí, could be placed in the same unit. West of the Paressí, inhabiting the more inhospitable areas of the Serro do Parecís, are the Nambicuara. With some justification

they may be considered an archaic remnant surviving in a refuge area. To the south, across the semiarid Planalto do Matogrosense, and living in the Paraguayan rather than the Amazonian drainage, are the Bororo. Racially their ties are to the south—the Chaco and the Pampas. As far as the data go, there is no reason to believe that this tall, rugged physical type extended north of the plateau barriers which bisect Mato Grosso into northern and southern portions.

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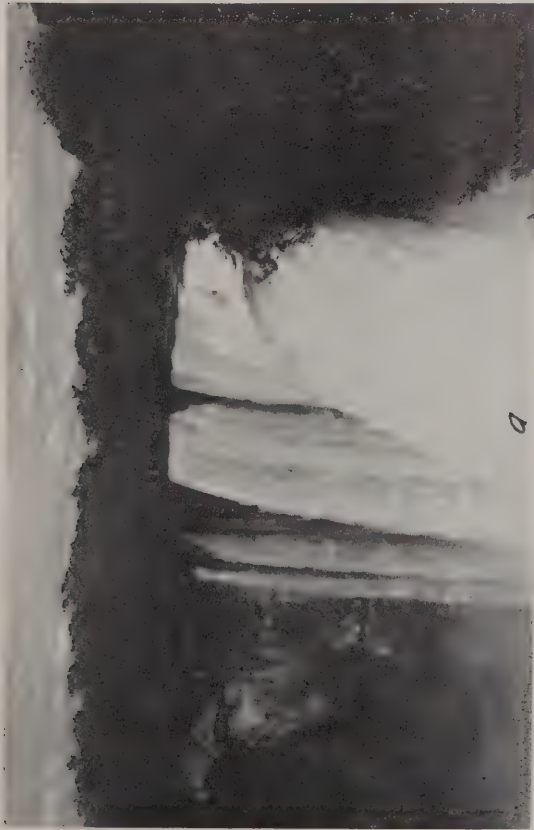


PLATE 1.—General scenes in Northern Mato Grosso.—*a*, Utility Falls on the Papagaio River. *b*, Upper Xingú village of Cuicóru (air photograph by courtesy of Mr. Harry Wright). *c*, Jatobá bark canoe and Camayurá family on the Kuluene River. *d*, Large piqui tree in Jacaré Camp.

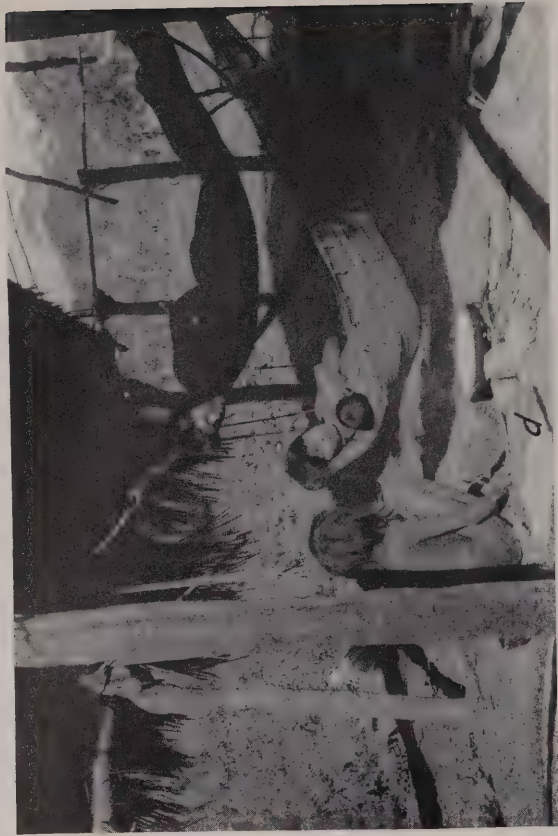
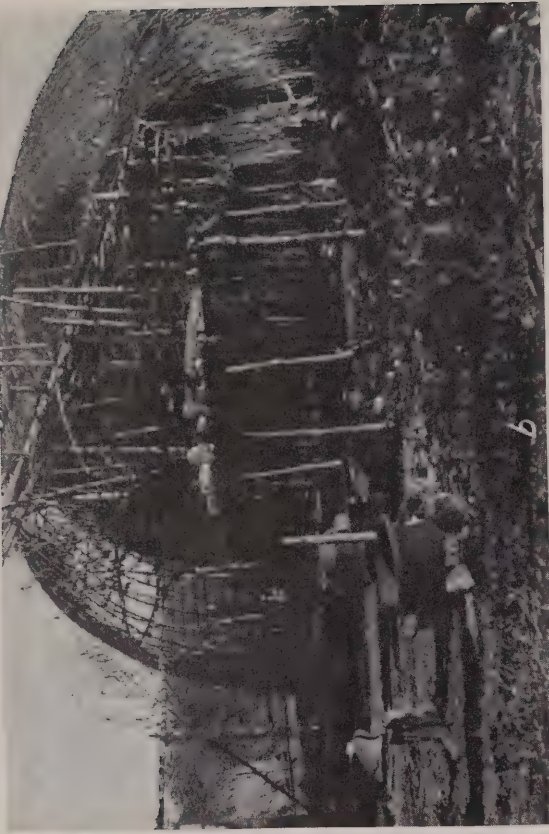
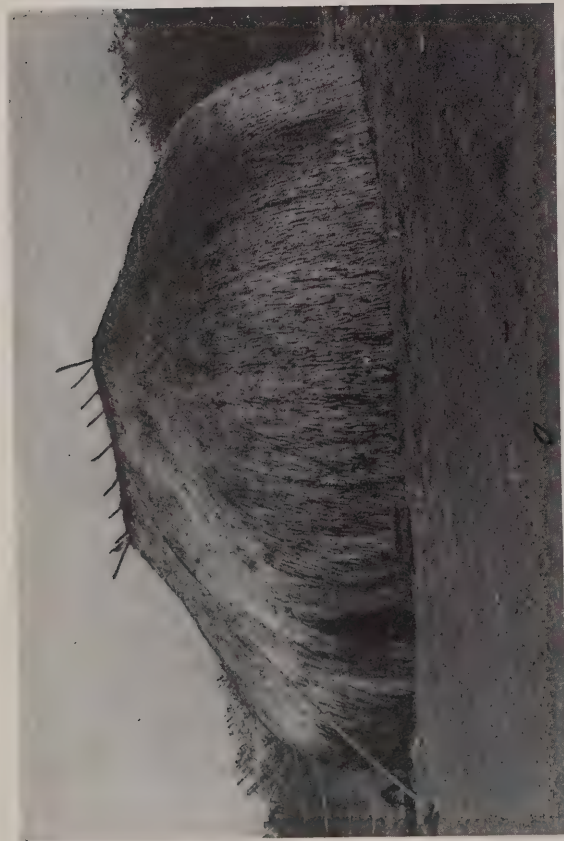


PLATE 2.—Houses and house construction.—*a*, Exterior view of completed house shown in *c*. *b*, Partially covered house under construction. *c*, Interior view of Camayurá house under construction. *d*, The arrangement of hammocks for sleeping in Camayurá houses.





PLATE 3. Manioc cultivation and preparation among the Camayurá.—a, Newly planted manioc. b, Bitter manioc just brought in from the field. c, Woman grating manioc over pot. d, Woman grinding dried manioc balls while another is baking *menyá*.





PLATE 4.—Camayurá women preparing manioc and fibers.—*a*, Manioc balls drying on flat basket. *b*, Woman sifting ground manioc meal. *c*, Woman spreading manioc meal on baking plate. *d*, Woman spinning cotton. *e*, Woman weaving hammock on two-post frame. *f*, Women preparing buriti fiber.



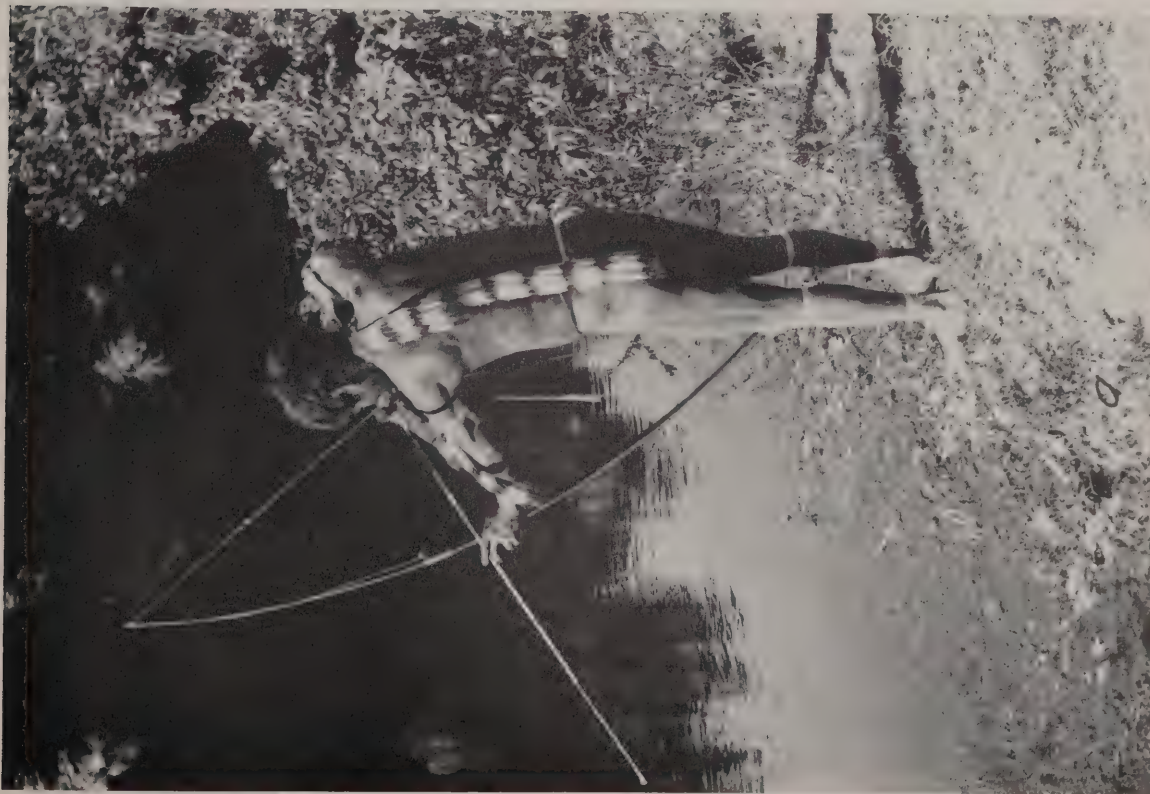


PLATE 5.—Nambicuará economic activities.—*a*, Julio demonstrating how fish are shot. *b*, Casendo weaving cloth for arm bands.



PLATE 6.—Nambicuara scenes.—*a*, Cascudo making fire. *b*, Nambicuara burden basket. *c* and *d*, Nambicuara girl with necklaces and painted designs in preparation for puberty ceremony. (By courtesy of Rev. L. Buckman.)





PLATE 7.—Camayurá scenes.—*a*, Man being scarified before undertaking journey. *b*, Man painted with urucú and genipapo in preparation for a dance. *c* Tamapú playing the sacred flute, *jakui*. *d*, Man playing the flute, *kurutai*.

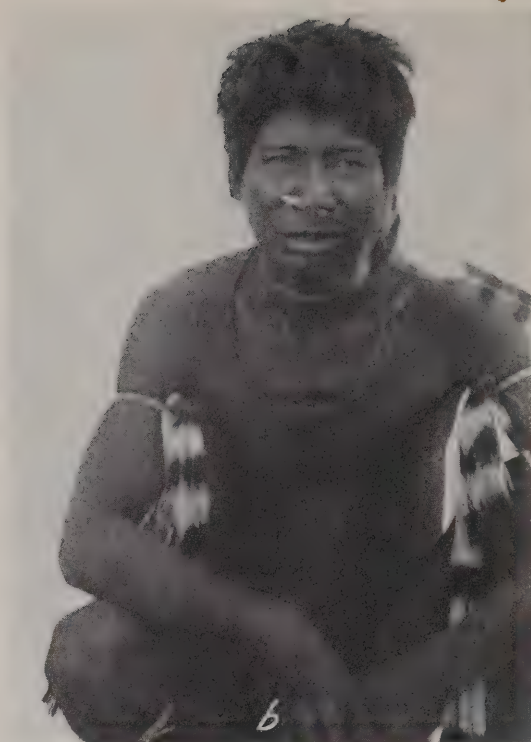
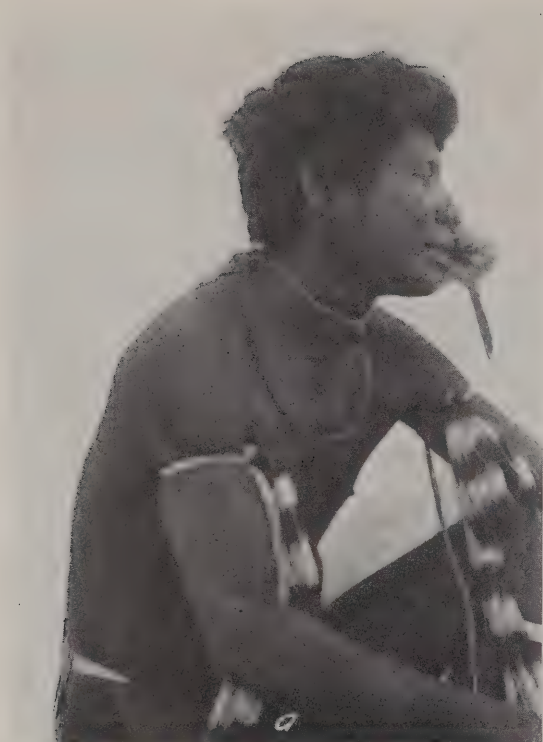


PLATE 8.—Nambicuara physical types.—*a* and *b*, Julio, with nose feather lip plug, and burití fiber tassels on arms.  
*c* and *d*, Julio's wives and child.

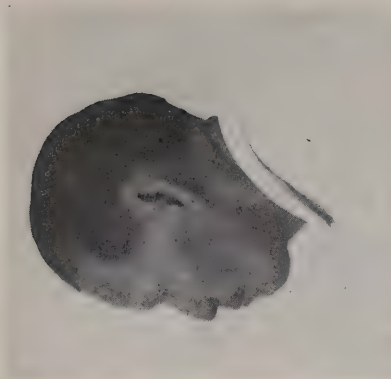




a



b



c



d

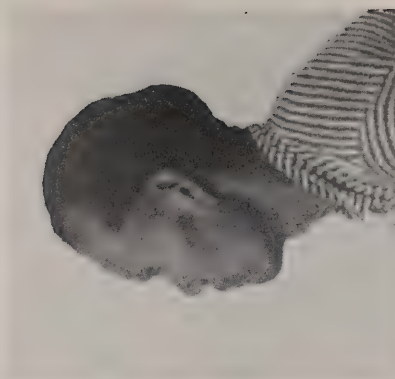
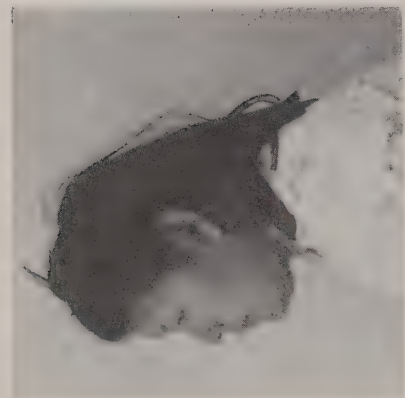
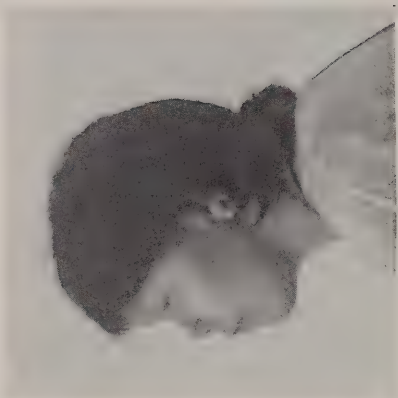


PLATE 9.—Physical types of Umotina men.



a

b



c

d

PLATE 10.—Physical types of Umoitia women.









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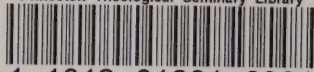
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